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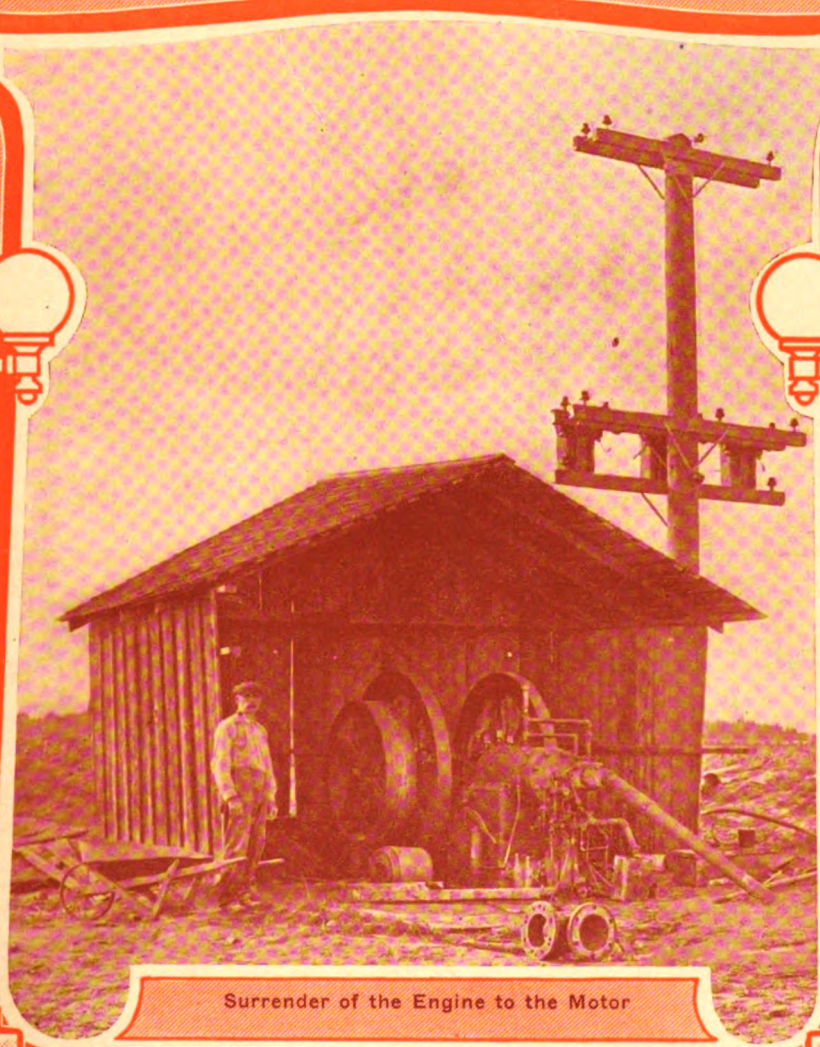

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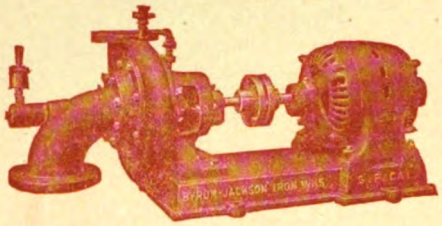

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San Joaquin Light and Power Magazine

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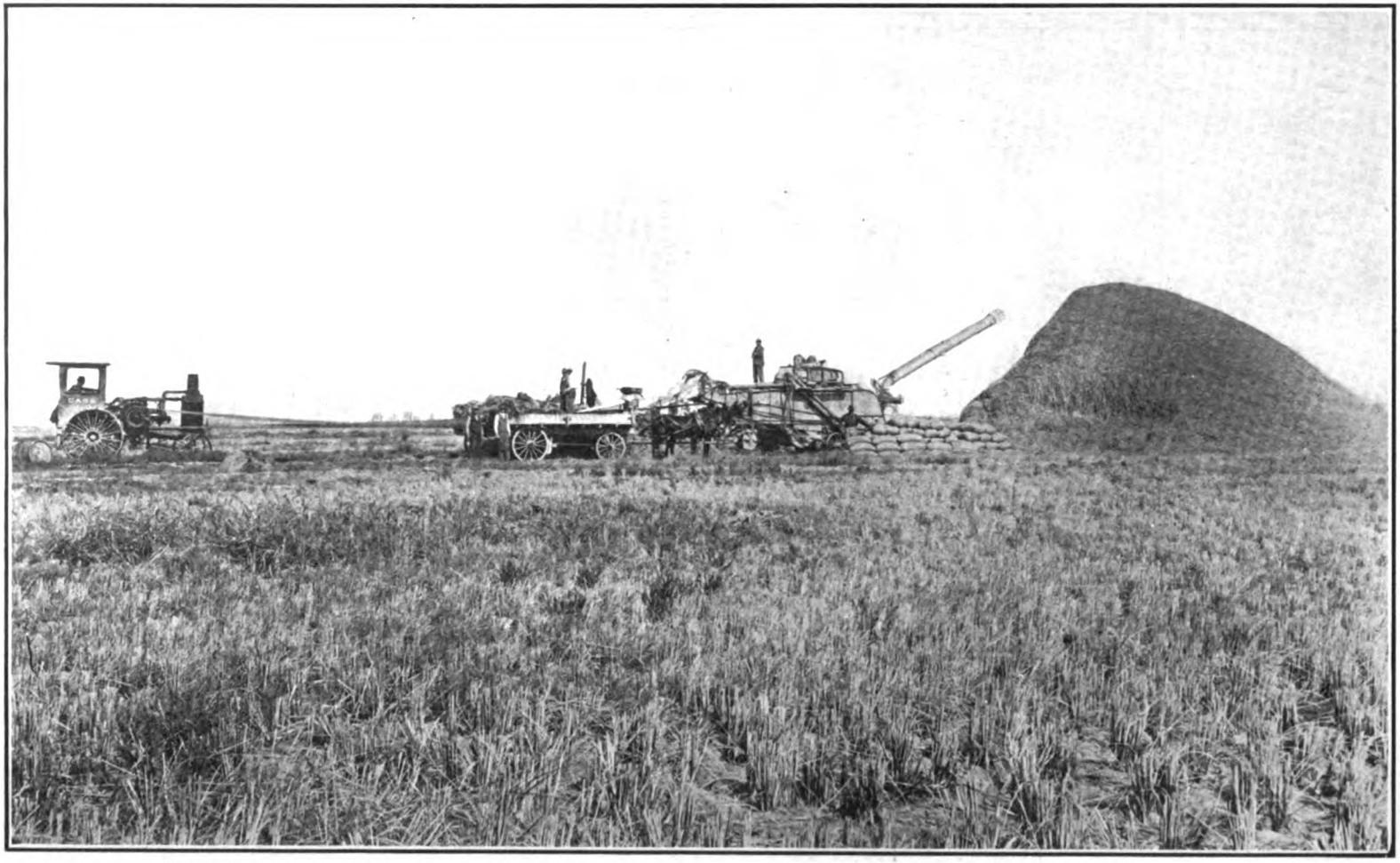

Threshing scene on the Schiffmann rice lands in Tulare County during the past season. The heavy stand of rice and method of operation are to be seen in the photograph

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SAN JOAQUIN LIGHT AND POWER MAGAZINE

Vol. IV March, 1916 No. 3

Rice—In the San Joaquin Valley 1915-16

In the August, 1915, issue of this Magazine, Mr. Roger M. Roberts, Agricultural Demonstrator of the Santa Fe System, and the Editor collaborated in an article reviewing the rice industry of the San Joaquin Valley to that date. The growing interest in rice provoked a heavy demand for copies of this article, and requests later followed for information concerning the 1915 crop and probable plantings for the 1916 season. The writers, following a trip over the districts after the recent harvests, and through personal contact with growers, have put their observations in the following article.

THE rice season of 1915 having passed into history, it would seem wise at this time to take stock of the situation in the hope that the lessons learned in the past season may be profitably applied to the production of the 1916 crop.

Nothing startling new has been discovered, nor is there any great warning to be issued to the growers of the 1916 season. The facts in the situation are clear to the man who has followed closely the growing of the crop. It is plain that the ground must, in order to produce profitably, be carefully leveled. A field of rice carrying different depths of water can be depended upon to ripen its crop unevenly and so give an undue proportion of green rice when threshed. It is of interest to note here that rice imported from Japan runs not to exceed 4 per cent green rice, while that of California is thus far running around 10 and 15 per cent green. Good drainage is essential to the end that the ground be quickly and completely drained preparatory to the harvest. Yields can be materially increased if the levees are made low and flat in order to permit the crop to occupy all the ground. Close observers of the failures and successes in the San Joaquin Valley are a unit in placing the blame for 90 per cent of the failures in rice growing to: first, improper levelling of the ground; second, insufficient or uneven water supply; third, too poor and dirty seed.

At no time is more than four or five acre inches required and the levees should be built flat and of a height to not much more than hold this depth of water. If the ground be made level for each check, with drops from one check to another, then the irrigation and drainage question will take care of itself. A field with excessive fall should be leveled with a series of drops to the end that each unit or check be level with just sufficient fall to permit a movement of fresh water from one end to the other.

The matter of seed rice assumes with the beginning of this season a position of paramount importance. To the student of good rice culture, the lesson of proper seed is self-evident and he will profit accordingly. It is not apparent, however, that growers appreciate the importance of first growing good seed and, secondly, planting clean seed. It is not too much to say that the future of the rice industry in the San Joaquin Valley depends almost altogether upon the character of the seed that is used from now on. The use of foul seed carrying the germs of red rice, green rice, water grass and other pests will force the abandonment of the business through inability to grow profitable crops unless steps are taken to correct this tendency. Clean

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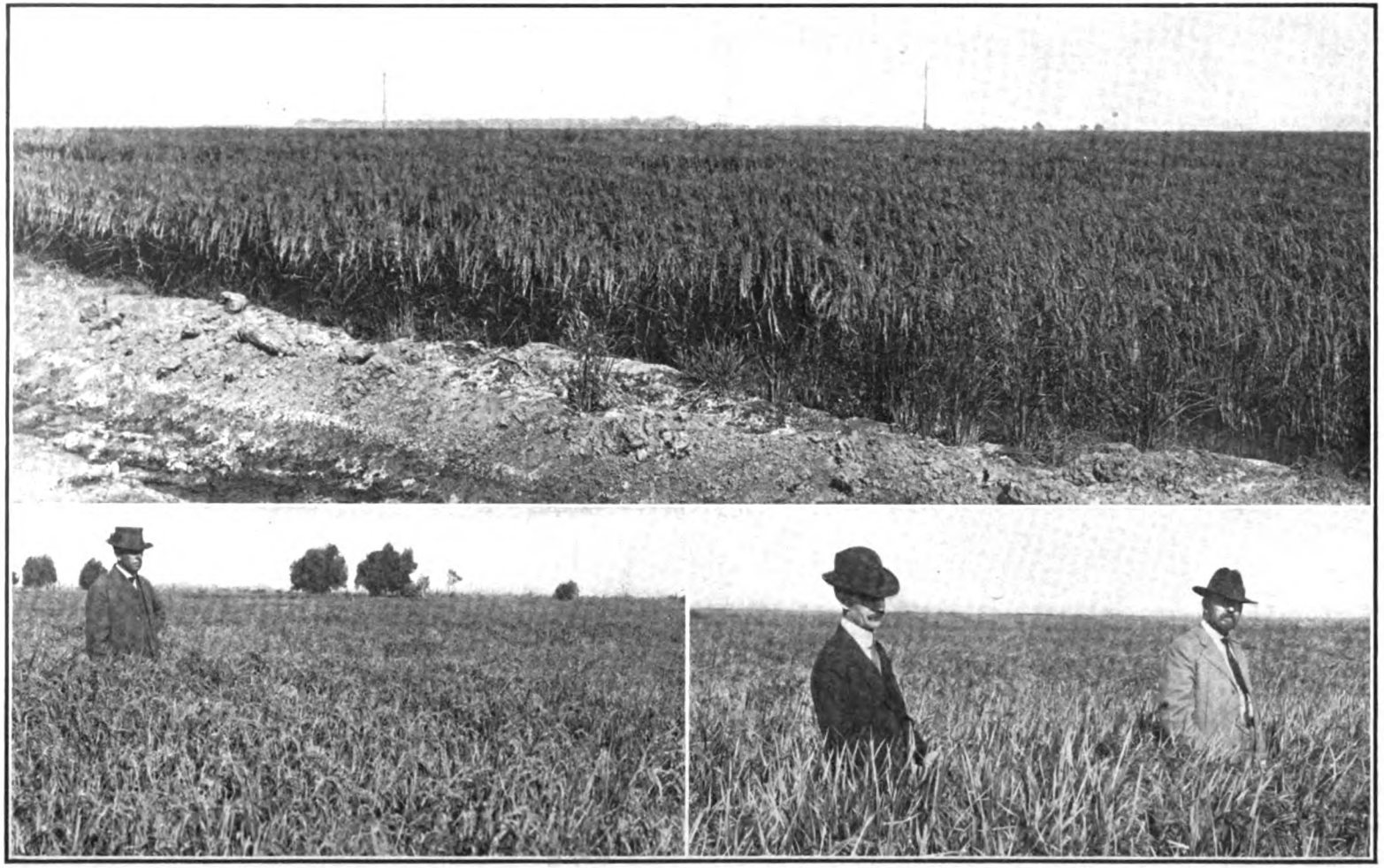

Examples of San Joaquin Valley rice crops. Upper, section of the Miller and Lux fields near Dos Palos. Notice the heavy alkali character of soil as shown in the lower left hand corner of the photograph. Lower left, Roger M. Roberts, Agricultural Demonstrator of the Santa Fe System, in a field of rice on the Olcese and Buckenau lands near Merced, which reaches higher than his waist. Lower right, field of Miller and Lux plantings, C. E. Chambliss, United States Agronomist, on left, and D. A. Leonard, former superintendent of Miller and Lux rice lands.

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seed means a kernel that is plump, heavy and fully matured. As rough rice comes from the thresher it is unfit to be sown. The first selection should be made in the field from crops which mature evenly and are unmixed with seeds or other varieties of rice. After threshing, the seed should be recleaned to the end that the final selection be only of plump, heavy kernels and free from trash or weed seed.

It has been the boast of California that she has had no red rice. This is the worst of all rice pests and, owing to its similarity to white rice, cannot be extracted from white seed by any mechanical means. This pest often takes possession of the rice fields if allowed to pursue its course unchecked. Red rice can be distinguished from white rice by its loose and open head with few grains. A small infestation can be controlled the first year by pulling in the field, but, if allowed to grow unmolested, will increase rapidly as the seed shatters out very badly. Red rice, once established, is almost impossible of eradication and always decreases the value of the crop. Importance attaches to this phase of the industry in the San Joaquin Valley owing to the proven fact that several lots of rice, designed for use as seed this year, contain dangerous quantities of red rice. The pest is here, on the ground, and must be reckoned with.

There is nothing of new interest as alkali relates to rice. The crop made good returns on various types of soil carrying small to considerable amounts of alkali and there is no reason to alter previous advice in this matter. It has been learned that only inconsiderable amounts of alkali are removed from the soil through surface flooding, and that considerable surface accumulations are redistributed through the surface few feet. This driving down of the harmful salts is likely to make possible the germinating of such seeds as grain and alfalfa and the maturing of a crop following rice. The thick fiberous rice roots add materially to the humus of the soil and to the power of the soil to produce of other crops than rice.

Rotation of crops is the all important factor in the agriculture of any country, and rice is of great importance as a preparatory crop when used in connection or rotation with other crops as grain or alfalfa or corn. The value of rotation to rice is that it frees the land from pests and reduces to a minimum the liability of the soil to become sour and waterlogged. At the same time land values are enhanced by making the land adaptable to crops which it would not previously sustain, and also make more certain the free use of the land for rice over a long term of years. Any rotation with rice distinctly adds to the permanency of the venture.

The situation as it relates to the varieties remains about the same. More than 90 per cent of the California crop is of the Wataribune variety, although some attention has been paid to the Italian kinds and certain trials have been made of various other sorts, as the Blue Rose and Carolina long grain. The Wataribune is satisfactory from the standpoint of heavy yield and high milling qualities. On the other hand, the best market asks for a long grain rice and the grower asks for a variety with the good qualities of Wataribune but maturing in a slightly shorter time. In due time the state and United States experimenters will doubtless announce that they have found, from their thousand trial varieties, one which will meet all these requirements. In the meantime the grower can safely pin his faith to Wataribune.

San Joaquin Valley rice has proven to mill out admirably, producing sixty to seventy pounds of clean finished head rice to one hundred pounds of the rough. The by-products consist of the broken rice, used mainly for chicken feed, polish or flour, and bran. The outside husks are of no value for feeding purposes and are in fact dangerous as they irritate the stomach and cause impaction. The bran consists of the outer covering, or cuticle, of the husked rice grain, together with the gluten layer just under the cuticle, and the germ, together with a small amount of the husks. The value of the bran is directly proportioned to the amount

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of husks it contains and it would be wise to restrict the name bran to only such product as contains 10 per cent or less of husks. This would guard against fraudulent adulteration and protect the buyer of this valuable by-product.

The flour, or polish, is mainly starch, as is the finished head rice, and is derived from the polishing process. It is one of the best known feeds for little pigs and young hogs, especially when fed with skim milk.

The bran is valuable as a cattle feed and milk producer, and in fact is of higher nutritive value than the head rice itself. In this case the by-product is a better food than the product itself, which speaks volumes in favor of the use of whole, or brown rice, in human consumption as against the head, or polished rice. There should be an insistent demand from dairymen for rice bran as soon as they learn its value. It is highly digestible and one of the very best milk producers known. As indicating the results that can be obtained by feeding dairy cows rice products, the experience of C. J. Howell, of Fresno, may be stated. To six cows he fed a good portion of cooked rice product twice daily, and in one week increased their milk output $5.85 in value.

An important development has been made in the milling situation in that the first rice mill in the history of the San Joaquin Valley has been established and is now in operation. It is on the property of the Schiffmann rice lands, near Pixley, and is owned and operated by the Fair-all Rice Products Company. Although a small plant, having a capacity of four hundred pounds an hour, it has been operating at a surprising efficiency. From one hundred pounds of rough rice it turns out seventy-five pounds of head rice and only three per cent of broken and cracked rice, which gives a finished product in polished head rice of 72 per cent, a very remarkable achievement in the milling of rice. Mr. Ray Fairall, superintendent of the Schiffmann rice properties and the owner of the mill, is now marketing his products, both the polished head rice, and the brans and flours, direct to the consumer and has thereby solved his plantation marketing problems, and perhaps, what is more important, made the beginning of a business enterprise that promises to make its influence felt throughout rice circles of the state.

The plantation mill undoubtedly offers the solution of the marketing problem for the large rice grower. A small unit is not expensive to operate and gives to the grower almost all of the advantages now on the side of custom milling companies. If the grower will utilize his milled by-products in the feeding of his own stock, the measure of profit from his rice fields will be largely increased. Home milling of rice makes for diversification on the farm, a condition most heartily to be desired. It is adding another string to the farmer's bow.

Fair-all Rice, the first San Joaquin Valley finished product, is now on the market and a demand is being created for it of such proportion that the little mill is kept busy filling its orders. Its installation has been so designed that additional units may be installed and it is reasonable to expect that a rice mill of considerable size will grow from it in the not far distant future.

Kern County led in the 1915 harvest with an output of 35,000 sacks from 1,140 acres. Kings County, however, made the highest average yield per acre, its output being 38 sacks. Where level checks were the rule and water conditions were favorable, some especially high yields for small tracts were made. At Merced, eight acres of the Olcese and Buckenau plantings averaged 49 sacks to the acre, while on the Schiffmann leases in Tulare County a yield of 55 sacks per acre was taken off several pieces. Yields of 35 to 45 sacks per acre were common.

So far as can be computed at the present time, the valley produced 86,503 sacks from 2,945 acres, or an average of 29 sacks to the acre. There were 5,500 acres planted the beginning of the season. The loss is due to overestimated water supply, which caused the planting of more acreage than

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could be properly cared for, and lack of dispatch in harvesting methods.

The price prevailing this year has been somewhat lower than last year. It has hovered between $2.10 and $1.75 a hundred pounds. At the lower figure there is good money to be made by the grower, provided he is going about his business understandingly. Rice is not an ordinary crop and the speculator who launches forth in the hope of making a big killing one season and then quitting, should stop before he starts. All students of the industry in California are agreed that a rice proposition that will not make money when the output is quoted at $1.75 is being conducted on an extravagant scale.

The output of the San Joaquin Valley for the season of 1915 is as follows:

County	Acres	Sacks
Kern	1140	35,000
Tulare	300	10,000
Kings	207	8,120
Fresno	1156	29,021
Merced	22	762
Stanislaus	120	3,500
Total	2945	86,503
Average sacks per acre		29

Kern County

District	Acres Harvest	Sacks
Button Willow	200	
Rio Bravo and Shafter	175	
Wasco	630	
Delano	60	
Bakersfield	75	
Total	1140	35,000
Average sacks per acre		31

Tulare County

	Acres	Sacks
Schiffmann Rice Properties	300	10,000
Average sacks per acre		33

Kings County

Grower	Acres Harvest	Sacks
Thornhill Ranch	170	5,868
D. L. & R. R. Teague	17	1,776
J. F. Willoughby	20	476
Total	207	8,120
Average sacks per acre		38

Fresno County

Grower	Acres Harvest	Sacks
Miller and Lux	800	20,000
Fitzwilliam Ranch	80	1,500
Fresno Irrig. Farms	40	850
K. E. Kerr	140	4,500
C. J. Howell	31	721
P. R. Paolini	45	1,000
Wiley	20	450
Total	1156	29,021
Average sacks per acre		25

Merced County

Grower	Acres Harvest	Sacks
Olcese and Buchenau	20	702
Cop-op. Land & Trust	2	60
Total	22	762
Average sacks per acre		34

Stanislaus County

	Acres	Sacks
Estimated Harvest	120	3,500
Average sacks per acre		29

The planting for the 1916 season will probably be 6,000 acres, an increase of 500 acres over the previous season. The northern part of the valley, notably Fresno and Merced counties, will show a heavy decrease, while the southern section, Kern, Tulare and Kings counties, are making rapid strides in increasing their plantings. This is true of Kern County in particular, where more than 3,000 acres will be put in; and if a number of projects now under way are consummated before the time gets too late to plant, this acreage will be very considerably swelled.

Perhaps one of the most startling results of the past season has been the withdrawal of Miller and Lux from all 1916 plantings. The fact is no secret that the harvest of their 1,000 acre crop at Dos Palos last season was disappointing. Although the firm has given out no figures, an estimate of 20,000 sacks for 800 acres harvested is said to be very close. The company also had 120 acres in Kern County. This discouragement, however, cannot be laid to the door of the rice industry, and should have no influence upon the future plantings in the valley. The in-

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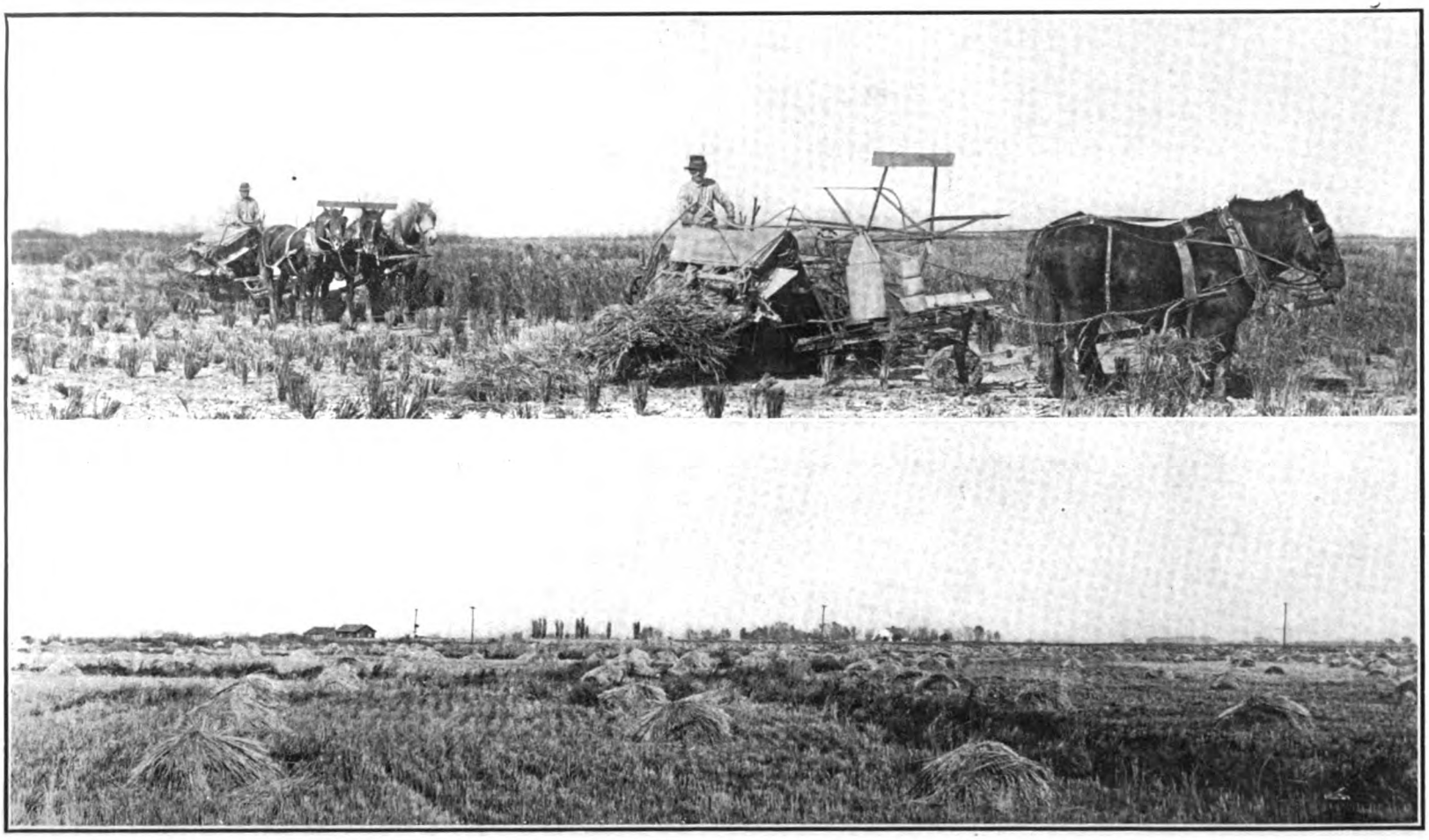

Harvesting operations during the 1915 season. Upper, cutting on the Miller and Lux lands near Dos Palos. The binders are operated by small gasoline engines. Lower, rice in the shock on the Schiffmann lands in Tulare County, curing before being run through the thresher.

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terest of Miller and Lux in agriculture is only as it pertains to the company's principal business of cattle raising. They farm only as an adjunct of the cattle business. They do not conduct their own milling operations, by means of which the by-products, which are so valuable for cattle feeding, can be obtained, and selling the product on the open market has not been very attractive to them this season. In justice to the rice industry in the San Joaquin Valley, it should be stated that experts who went over the 1,000 acre stand at Dos Palos just previous to the beginning of the harvest the latter part of September, pronounced it the finest stand, for so an extensive acreage, to be found in the state.

Kern County is manifesting the greatest interest and activity in adopt- in the industry. The Kern County Land Company is this season making its initial effort and is preparing 160 acres which have been leased to L. F. Lavers. If the results are satisfactory, the company plans to plant extensively next season. The Harris planting, of 160 acres near Wasco, is also significant, and the recent lease of 100 acres in the Button Willow district by Elmer H. Hall of Willows at a cash rental of $12.50 per acre is also an important development.

In Tulare County sufficient water has been developed during the winter and spring on the Schiffmann rice lands to warrant the planting of 1,000 acres, which will be handled by four leasers. Near the southern border of the county, several hundred acres are expected to go in, and the F. H. Merrill Land Company of Los Angeles is also planning a large acreage for this locality, which it hopes to begin planting this season. A most important development for Kings County is the activity of the Guaranty Land and Investment Company near Corcoran. The company is developing four wells to supply a 400 acre tract, which has been leased to outside growers for the season. Additional development is now planned for next season. There is considerable talk of development in the Traver country and, although a company has been formed, no actual development work is yet under way.

Fresno County suffers seriously by the decision of Miller and Lux to discontinue planting, but several successful smaller planters have increased their acreages. It is doubtful if Merced will have an acre of rice field this season. The plantings last year were small but successful. However, the wet winter has retarded the work of land preparation and last year's planters do not think they have time to properly get in a crop. Stanislaus County will have the same acreage.

An effort has been made to estimate the probable 1916 planting. It has been impossible to fully investigate all the reports of proposed development work, and if any bona fide projects have been left off the following list we regret the inopportunity that prevented knowledge of them. However, it has been our aim to accept only authentic and conservative information, and if these figures underestimate the coming season's planting we would rather it be so than overestimated.

Below are the probable plantings in the respective counties.

Estimated Planting 1916

	Acres
Kern County	3,010
Tulare County	1,200
Kings County	760
Fresno County	630
Stanislaus County	220
Total	5,820

Note—There will probably be sufficient small plantings not accounted for in these figures to bring the total to 6,000 acres.

Kern County

	Acres
Rio Bravo District	300
Pond	80
Button Willow	300
Delano	250
Bakersfield	300
Wasco	1,680
Scattering	100
Total	3,010

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Tulare County

	Acres
Schiffmann Rice Lands	1,000
Thos. D. Campbell Lands	100
Albertson	100
Total	1,200

Kings County

	Acres
Guaranty Land Co.	400
Thornhill Ranch	200
Maxson and Dieter	80
Teague	40
Cooper	40
Total	760

Fresno County

	Acres
Fresno Irrig. Farms Co.	200
K. E. Kerr	140
P. R. Paolini	200
Fitzwilliam Ranch	40
C. J. Howell	10
Wiley	40
Total	630

Stanislaus County

	Acres
Oakdale	200
Claus	20
Total	220

Summary

The rice situation at this time would then seem to hold out every inducement to the man with some skill and a desire to produce a good quality crop. The promoter also would seem justified in advocating this cereal as a fairly safe line of farming and one likely to prove profitable.

From north to south in the San Joaquin Valley the growing of rice, under a wide diversity of conditions, has proven profitable over a period of three years, and men who went into the business as experimenters are continuing as permanent farmers in this direction.

The wide difference in the kinds of soil and the high alkali content of some of these soils, leads the authors to fairly believe that there are thousands of acres in the San Joaquin Valley now lying idle for want of an adaptable crop that can be profitably used for rice.

If the industry is to permanently succeed, however, certain dangers and pitfalls must be avoided. Failure is likely to be the lot of the man who does not properly level his ground and disappointment will greet the man who uses poor and foul seed, while both will work harm to the industry. Avoidance of these two great dangers and reasonable attention to the details of culture will make for the stability and permanency of a great industry in the San Joaquin Valley.

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Electrifying the Poultry Industry—Fooling the Hen to Increase Her Laying Record

In the early days of the electrical industry, electricity was used only for lighting purposes. Even though more expensive than other forms of lighting, it rapidly displaced them, owing to its greater safety, simplicity of control, and cleanliness. Later the electric motor was invented, and it soon practically displaced all other forms of motive power, wherever it could be applied for the same reasons. More recently it has been applied to industrial heating, and is making rapid strides in this field, particularly in the line of domestic cooking. The significant fact in this connection is that wherever electricity has been applied, it has almost invariably increased the efficiency, or lightened the labor, or reduced the hazard, or reduced the cost, and in many cases it has done all of them. The poultry industry is one of the latest fields to be invaded by this versatile agent, and there is every indication that the same results will follow as have in other lines.

In England extensive experiments have been made with a view to stimulate the growth of young chicks by subjecting them to the vibrations of high-frequency alternating current. So far as we know, it has not been applied to in commercial poultry plants as yet, but the experiments indicate that there is a possibility that success will be attained.

A great many successful poultry raisers now have their laying houses equipped with electric light, and by means of an automatic switch turn on the lights during the short winter days about five o'clock in the morning, so as to get the hens up and busy hustling for food a couple of hours sooner. It is quite generally conceded that a hen's egg producing capacity is proportional to the amount of exercise she gets.

For a long time poultrymen have contended that the short day was responsible for a short egg production.

"Many years ago," writes a California poultryman, "I conceived the idea that if I could only light my poultry houses in the winter and so get the birds to working as early as they are wont to do in the summer, it would not only be a benefit to the fowls in the matter of health, but would very materially help along the lines of egg production. Unfortunately, at the time I was not in close proximity to an electric line, nor did I have a properly constructed hen-house; these disadvantages have been removed, however, and now I have installed two 25-watt Mazda lights in each house, and from past records without the use of the lights I can say that the egg production since installing the lights has increased forty per cent over any other year at this period.

"The lights are turned on about 4:45 a. m. and put out as soon as the birds can see, which at this time of the year is about 7 a. m."

Mr. C. R. Fontana, a prominent poultry raiser of Solano County, has been able to increase his egg production forty per cent by these means, and this estimate is based on a comparison of the results secured just preceding the

An electric incubator may be connected to any light socket

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installation of the electric light with previous years, when it was not used.

Electricity has had its most extensive application in the poultry industry, however, in the artificial incubation of chicks. It possesses so many advantages, and so few disadvantages for this purpose, that it is rapidly displacing other methods. Some poultrymen confidently expect to see its use become general wherever electricity is available. All danger of fire is eliminated. Since no fumes or odors are given off by the electrically heated machines, they may be used in any convenient room in the house. All of the drudgery in operating the machine is done away with, for after the automatic electric regulator has been once adjusted, the machine requires no further attention, except to turn the eggs twice a day. The manufacturers claim that a temperature to within one degree of normal will be maintained, and the experience of users indicates that such is the case. A variation of only a fraction of a degree of temperature in the egg chamber will turn the electricity either on or off.

If the power should go off the line for a short time, the automatic regulator returns to the "on" position, and as soon as the power is restored to the line, the machine heats up, and goes on regulating as before. Several successful hatches have been reported where the power has been off as much as eight hours, and in one case a lady reports a highly successful hatch where the power was off during the last week for about eighteen hours at one time. An outage of more than two or three hours nowadays, with the efficient service rendered by most electric companies, is a very unusual occurrence, so that operators need have nothing to fear from this source.

There are many poultry raisers who have lamp-heated incubators in good condition, and operating satisfactorily aside from the disadvantages of the oil lamps. Many of them, however, do not feel warranted in discarding these machines to buy electric incubators. In order to meet this situation one enterprising manufacturer, whose advertisement appears elsewhere in this issue, has put out a proposition to convert lamp-heated machines to electric heat. They will furnish the electric heating units, the automatic electric regulator, a miniature incandescent lamp, with a switch for lighting the egg chamber for purposes of inspection, and complete instructions for installing this equipment. It is claimed by them that the change can be made in three or four hours by any

On the left a lamp heated incubator of well known make. On the right the same machine converted into an electric

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one handy with tools. This proposition makes it possible for poultrymen to avail themselves of the advantages of electric heat for their incubators at a nominal expense.

The brooding of chicks by electricity is also coming rapidly into favor. Most electrically heated brooders have a miniature incandescent lamp within the heated space. The chicks are attracted by this light just as are other animals and insects, and will go under the hovers much more quickly than in other forms. The electric heat is a dry energizing one, and many poultrymen who have used these hovers declare that their chicks develop more rapidly than with other forms of brooding. The cleanliness, safety and simplicity of the operation of the electric hovers also have a strong appeal to their users.

Bitter Clover, Well Known as a Field Pest, Now Recommended for Cover Crop

Another pest of the field that science has elevated to the position of the farmer's friend and ally is the common yellow or bitter clover. Experiments made at the University of California agricultural experiment station at Riverside, and confirmed by actual orchard planting, have demonstrated the superiority of bitter clover as a cover or green manure crop over the legumes and vetches commonly used for that purpose, and have put it in the way of superseding them.

Bitter clover is found growing wild all over California and Arizona under widely differing climatic and soil conditions. In many sections, as in the Imperial Valley, it is a prevalent weed of the grain fields. It is called by a variety of names, often contradictory —sweet clover, sour clover, yellow top, bitter clover. Of these bitter clover seems to be the most apt, as both the stems and the seed have a decidedly bitter taste. Scientifically it is known as Melilotus Indica, there being two other Melilotus clovers which are not true clovers but legumes.

For five years now the Riverside station has experimented with bitter clover, and in the winter of 1914-15 it was planted as cover crop in orchards of practically all the citrus sections of California. Its success was uniform. It yielded heavy tonnages on all soils, from the cobblestone soil of Southern California canyons to the stiffest clay adobes. As a cover crop it outyielded the common vetch and the Canadian field pea, the two legumes most used for this purpose. It has increased the yield of the crops following its plowing under and incorporation in the soil to a greater degree than any of the other legumes tested. It is practically immune to aphis and will stand more frost than either vetch or peas.

In addition to these advantages, bitter clover has yet another in its root system. All the Melilotus clovers have a deep tap root that extends much further into the soil than the roots of peas or vetches, thus rendering it more effective in breaking up plow-sole or hardpan.

Bitter clover starts slowly and should be sown early, about the middle of October if it is to be plowed under by the middle of March. At present the seed supply is largely obtained from the screenings of wheat, but conditions point to bitter clover being raised as a seed crop. The seed costs from 7 to 10 cents per pound and should be sown from twenty to thirty-five pounds to the acre.

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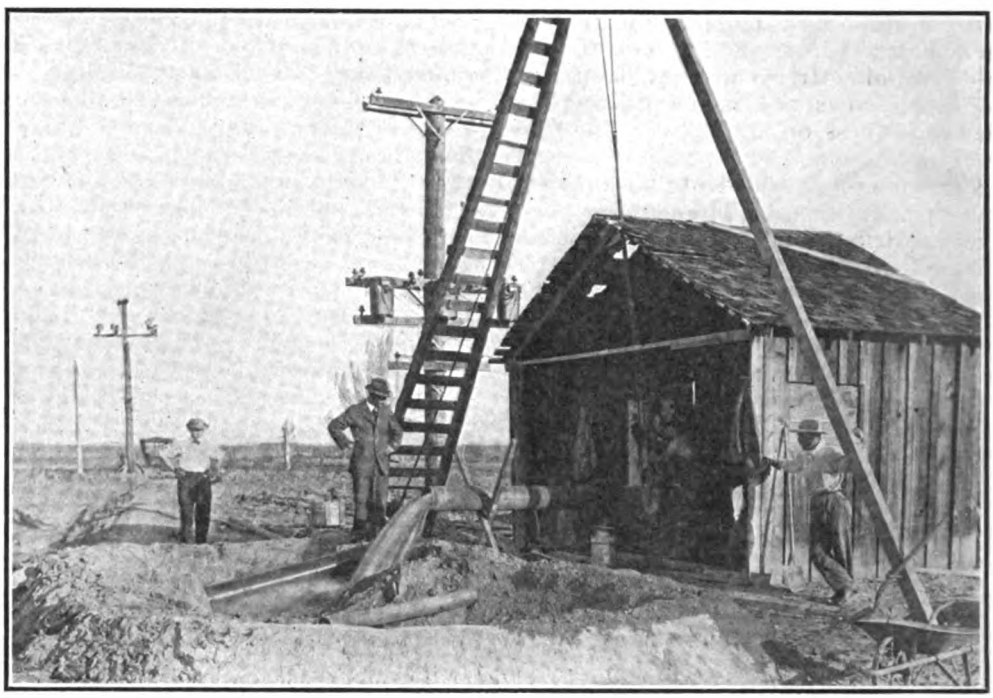

Developing a 24-inch well on the Palm Ranch in the Wasco district. This well is electrically operated and is supplying an excellent head of water for the irrigation of this famous property.

Many New Electric Pumping Plants Tell of Rapid Development of Northern Kern

Bespeaking the rapid development of farm lands in the northern part of Kern County, is a wonderful record for electric pumping installation just reported by District Agent O. A. Walthall, who has charge of the McFarland, Wasco, Delano and Shafter territories. In these districts he had signed, at the end of February, a total of 103½ horsepower in small irrigation plants thus far this season. Mr. Walthall reports that there are fully fifteen more irrigation plants to be installed within the next few months and these, together with the anticipated installation of a number of large-sized plants in the rice fields west of Wasco, will increase the new installed capacity in his territory to a very flattering mark. The success of the electric motor for irrigation purposes in Mr. Walthall's territory is in evidence on every hand, and this season he has been reporting a number of contracts from owners who until this time had been operating their wells by means of gasoline engines.

Following are the new installations recently made by Mr. Walthall:

C. H. Styles of McFarland a 10 horsepower motor and No. 4 Bean pump on his home place to supplement the water supply now derived from a 20 horsepower plant that has been installed about three years.

C. H. Stiles and H. M. Jones of McFarland a 10 horsepower motor and No. 4 Byron Jackson pump on the east one-half of the northwest one-quarter of section 2-26-25 to supply water to eighty acre alfalfa ranch they are now developing.

A. P. Neher of McFarland a 1 horsepower motor to run a cream separator

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and other dairy machinery on his big model dairy ranch two miles west of McFarland. Mr. Neher now has a big string of cows and is going into the dairy business on a strictly up-to-date basis.

Crowe and Smith of McFarland a 5 horsepower motor. They have a big fine meat market in Delano, and have just opened up a modern shop in McFarland. They have put in a 1½ ton ice machine, and a big ice box, and have installed a thoroughly modern sausage kitchen, to meet the rapidly increasing demand for meat and butcher shop products in and around McFarland.

The Palm Ranch of Wasco, owned by the Whittier Land and Development Company of Whittier, have installed two 15 horsepower motors and No. 5 Byron Jackson pumps to augment the supply of ditch water from the Calloway Canal. The ranch has been leased to a syndicate of Japanese farmers and orchardists and they are making many improvements on the place. This ranch consists of 640 acres of very highly developed land, most of it being in orchards and vineyards. The yields of fruits and raisins are enormous each year, and the produce, being of such extraordinary quality, is much sought after by various firms of fruit handlers.

S. H. Johnson of Wasco a 5 horsepower motor and No. 3 Byron Jackson pump to take care of his 40 acre alfalfa ranch in the south end of the colony.

John Eberlin of Wasco a 5 horsepower motor and Krogh pump replacing a 25 horsepower gas engine that has been operating for about four years, installed before the San Joaquin lines were built into the Wasco Colony.

Jacob Stoll of Elmo a 5 horsepower motor and Fresno Agricultural Works pump installed by Crowe and Martinusen of Tulare. Mr. Stoll lives at Santa Paula, and his brother-in-law, Mr. Jones, is in charge of the ranch. They are going to have a big dairy ranch and raise a lot of hogs on the by-products and corn.

Richard Arenz of Pond two 10 horsepower motors and No. 6 Byron Jackson pumps. Mr. Arenz recently bought the land owned by Jesse Peter west of Pond. It was on this ranch that the first rice in Kern County was raised. They are replacing the gas engine that Mr. Peter operated for three seasons, with a motor and are putting in another well to furnish additional water to take care of 160 acres of rice. They are going into the rice business on a big scale. Mr. Arenz' son-in-law is in charge of the ranch and will have everything ready when the planting season begins.

According to a consular report, American automobiles have become most popular in Norway in the last few years, and their sale continues to increase from year to year. Formerly German cars dominated the market and sold from 50 to 75 per cent higher than American makes. Because of their cheaper price and excellent construction, American cars now control the market, and all classes of American makes are represented. The low import duty of only 12 per cent ad valorem is a further incentive to their importation. Trucks and automobiles for route traffic, seating more than four passengers, suitable for use in time of war, are admitted under special conditions at 5 per cent ad valorem. American cars are much in favor.

A system of utilizing gas from a sewage tank for light and heat is described by Charles C. Hommon in the Engineering Record. By capping the vents of the tanks of the sewage treatment plant at Atlanta, Ga., it has been possible to collect an abundant supply of gas and utilize it for lighting and heating the home of Hommon, who is chemist and bacteriologist in charge. The gas has high calorific value and as a sewage plant by-product can probably be used in other ways advantageously to reduce the maintenance cost of the works.

Cubic yards of rock and earth to the number of 130,149,368 were excavated on projects of the United States Reclamation Service up to the beginning of the present fiscal year.

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Canteloupes Offer Splendid Opportunity for Growers in San Joaquin Valley

By ROGER M. ROBERTS,
Agricultural Demonstrator Santa Fe System

California claims, with pride and profit, certain natural advantages in the growing of cantaloupes. These advantages are irrigation, long seasons free from frost, sufficient heat and sunlight for their best growth, an early spring and late fall, which permits the marketing of melons sufficiently early and late to give control of these markets. In other words, California is almost perfectly adapted to the growth of this vegetable.

These considerations apply almost exclusively to the interior valleys as the San Joaquin and Imperial, and it is here that the great bulk of California melons is produced.

The term cantaloupe is commonly accepted in America, though the same variety of melon is known in England as the muskmelon. It is, then, not incorrect to use the terms interchangeable.

It is the growing importance of the industry in the San Joaquin Valley which is of particular interest, rather than the present volume of shipments. In 1914, for example, there were produced in the state 5,146 cars of cantaloupes, of which all but 714 cars were grown in the Imperial Valley district. In the San Joaquin Valley, Turlock marketed 524 cars, Keys 124, and Sultana and Dinuba 26, a total of 714 cars. Brawley, in the Imperial Valley, is alone credited with 2,411 cars.

It is plain from this that the cantaloupe industry in the San Joaquin Valley is but in its infancy. While the center of the industry is at Turlock, there are, nevertheless, extensive areas of land in various parts of the valley admirably suited to this crop. The principal requisite of the cantaloupe is a warm, light soil, preferably subirrigated. The claim is made, however, and is seemingly substantiated, that a better melon is grown on lands not mediate and close to the market, is shown by the fact that cantaloupes subirrigated, but supplied with water either from pumps or gravity systems. In any case, there can be no argument but that the western melon grown under irrigation is a superior product to the eastern grown cantaloupe produced under rainfall. Higher prices are uniformly paid for the irrigated melon, as it is more consistently of high quality. The eastern melon is often marred in quality and appearance, due to lying on wet ground, which produces a white and soft spot on that portion of the cantaloupe next to the soil. This natural advantage in the hands of the California growers should be carefully protected by proper irrigation, which never permits the melons to lie on wet ground.

As the principal cantaloupe market is in the east, California is under the necessity of producing a superior article which will sell at a premium, in order that the difference in freight charges in favor of the eastern grower may be overcome.

The first cantaloupes to reach the east are from the Imperial and Coachella valleys and are usually on the market by the middle of May. These early melons are without competition for about two or three weeks when Texas cantaloupes make their appearance. This is about the first of June, or a little before.

Around the first of June, Louisiana begins to ship cantaloupes. Other states to follow during June are Florida, Georgia, South Carolina, Mississippi, and North Carolina.

California shipments last until the end of July, while Texas finishes two weeks later. Colorado supplies the late market with shipments, beginning in August and lasting until the end of September.

That there is a wide range of shipments from points far distant, inter-

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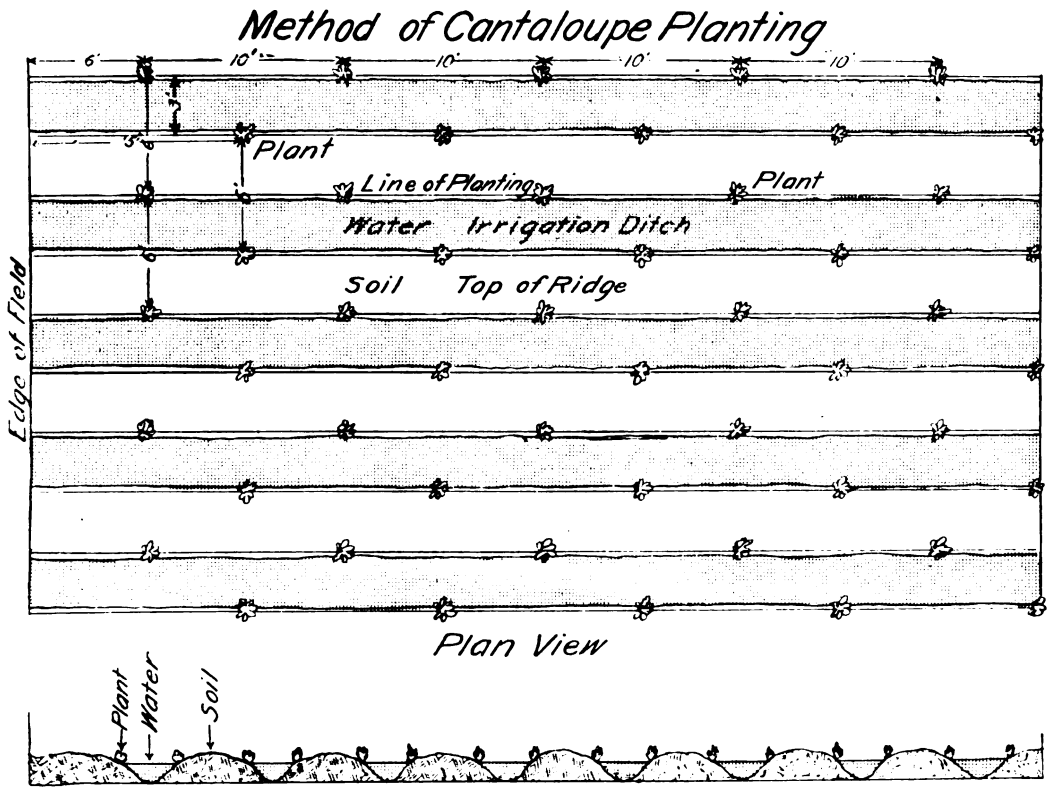

DIRECTIONS FOR PLANTING AND CULTIVATION OF CANTALOUPES

First, put the field in a condition of fine tilth.

At intervals of six feet strike out back furrows and continue plowing from both sides toward the center until each six foot space is plowed out. This will leave a dead furrow at the base of each ridge, in which to carry irrigation water.

The rough ground is then finished with a harrow, moving in the same direction as did the plow, and also irrigated to furnish moisture for germinating the seed and to determine the water line for guidance in planting.

The irrigating (dead) furrows being six feet apart, rows can be planted on each side of the furrows just above the water line which was established by the preceding irrigation. (See Cross Section. Somewhat exaggerated.) This will provide moisture and at the same time furnish high, dry ground for the vines and fruit and avoid their being submerged during irrigation.

The hills should be ten feet apart in the rows and to provide an even distribution of plants the rows must be "staggered" by "breaking the spaces." (See Plan.) There will, then, be a series of "staggered" rows, three feet apart with the spaces ten feet apart in the rows. Due to the breaking of the spaces, the plants will be spaced crosswise at six foot intervals and five feet ten inches on the diagonal.

Cultivation of the middles with a one-horse cultivator should be carried on as long as possible, and the furrows run through after each irrigation with a small plow. Two or three hand hoeings are desirable. Sow about ten seeds in each hill, and after danger of frost is past, thin to not more than two strong plants in a hill.

reach the consuming centers from California and Maryland, Texas and New Jersey on the same day. Nevada and New Mexico may compete with Indiana and Illinois for the same market, while California is at times in the position of competing with seven other states, all much nearer to the market, on the same day with the same perishable product.

These plain established facts can have but one meaning to the California grower. It means that his cantaloupes must be early, if possible, because that is a natural advantage, that they must be grown from good seed and the crop properly irrigated. Picking and packing must be carried on intelligently and with care to the end that the melons are shipped at the right time in proper containers and graded to meet the demands of the trade. California has two great natural advantages, earliness and irrigation. On this foundation, she should, by attention to the details of culture, picking and packing, be able to build a great and permanent industry.

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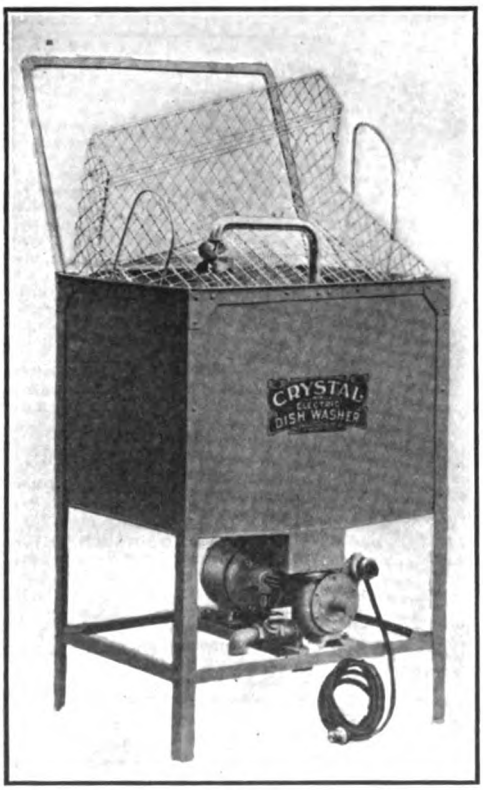
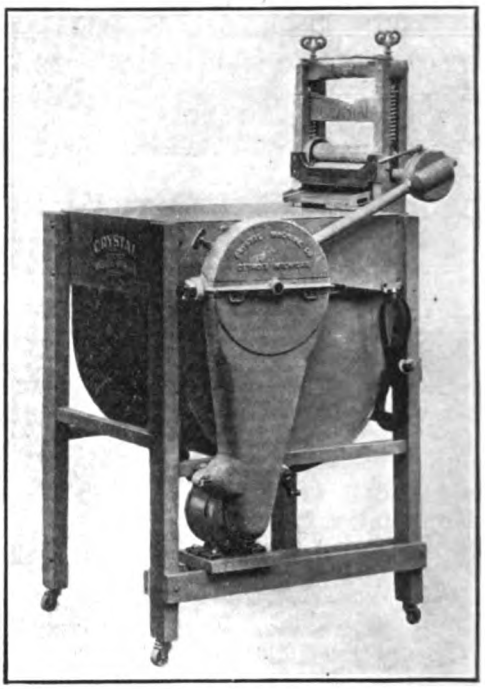
Latest Improved Electric Dish Washer and Clothes Washer Machines

There are many tasks of drudgery about the woman's housework, now eliminated by that ever willing and untiring servant, the electric motor. The Crystal Electric Dish Washer and the Crystal Electric Washer and Wringer are boons to the housewife.

The simple, solidly constructed dish washer is equipped with electric motor, pump, cord, plug and switch, and sewer connection. The dishes are placed in racks to hold the dishes, cups, glasses and silverware and the water is forced through and over them by means of the pump. The dishes do not move and breakage is therefore impossible. After the first washing the dirty water is drawn out and hot, clean rinsing water is put in. This rinses, sterilizes and leaves the dishes so hot that when the washer is opened the dishes are dry and all ready to be put away. The formerly disagreeable dish washing is thus done without even wetting the hands and yet with a great saving in time and great safety for the glass or china.



The Dish Washer



The Washing Machine

The Crystal washer, which is also manufactured by the Crystal Machine Company of Detroit, Michigan, has a different design from other washers of the cylinder type and is particularly effective. The cylinder does not reverse but the clothes do reverse inside it, due to the unique construction of the cylinder. This elimination of the reversing feature allows a tremendous saving in maintenance. The clothes in the Crystal cylinder are raised out of the water and dropped back into it continuously, taking fresh suds, air and steam with them. This combines the

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tumbling process with the recognized advantages of the vacuum process and gives the Crystal a distinctive cleansing power. Every moving part in the mechanism of the Crystal washer is entirely enclosed, thus removing all danger of being caught in the mechanism in any way. The wringer can be swung down out of the way, leaving the machine with a flat top which can be used as a stand when the washer is not being used for washing.

Both the Crystal washer and dish washer are driven by Westinghouse splash proof motors which are fully protected against moisture and yet have ample ventilation to insure cool running. There are no exposed electrical contacts so the motor, as well as all working parts about the machines, is protected.

News of Science and Industry

According to the Railway Age Gazette, the output of coal in Spain in 1913 was 3,783,214 tons, and the coke production was 595,677 tons.

All records for surveys made by the United States General Land Office were broken during the last fiscal year. The total area of accepted and approved surveys aggregated 14,339,349 acres.

Although the war caused a great slump in 1915 in the production of ores of radium and uranium, it caused a considerable increase in the production of ores of vanadium in this country, according to the United States Geological Survey.

An estimate of the 1915 output of Portland cement, made by the United States Geological Survey, says the Engineering and Mining Journal, indicates shipments from the mills of the country of 86,524,500 barrels, an increase of 0.1 per cent over 1914.

A consular report from Hongkong states that considerable quantities of surgical catgut are now being sent to the United States from South China. The gut is prepared chiefly in Kwangtung province and is manufactured from certain high-grade qualities of Human silk. It comes usually in two qualities, rough and smooth, and in different sized strands.

A statement issued by the Immigration Bureau of the United States Department of Labor shows that the number of immigrant aliens admitted to the United States during the year ending June 30, 1915, was 376,700, compared with 1,218,480 during the previous year. The number of emigrant aliens departing was 204,074.

The value of the annual production of the beet sugar factories of the United States increased 30.1 per cent from 1909 to 1914, according to figures compiled by the Bureau of Census. Reports were received from sixty-five factories for the season 1913-14, the products of which were valued at $62,605,209. Of these factories fifteen were in Michigan, thirteen in Colorado, twelve in California, seven in Utah, four in Idaho, three each in Wisconsin and Ohio, two in Nebraska, and one each in Kansas, Montana, Illinois, Indiana, Iowa and Minnesota.

Greenheart, a Gpiana timber practically unknown in this country, which has been used extensively in the Panama Canal, is described by A. K. Armstrong in the Engineering Record as one of the strongest and most durable of woods. It is 25 per cent stronger and 50 per cent stiffer than black locust, the strongest and stiffest of the one hundred and thirty species of North American wood. Greenheart is harder to work than oak, planing well, turning hard and badly, polishing indifferently, and taking nails badly, but in durability it is unequaled. In houses it has been known to last seventy-five years. In lock-gate construction it far outlasts oak and iron, which are good for only about twenty-five years.

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News of the Sierra National Forest

(From the Sierra Ranger)

The summary of receipts and expenditures for the fiscal year 1915 on this forest has been received. It shows a gratifying surplus of $7,079.01 in receipts over expenditures. To protect and improve the 1,495,066 acres of the Sierra and to administer the timber sales, water power uses, special uses, grazing and other activities within the Sierra cost us something over three cents an acre.

Although the "oldest inhabitant" insists that he "don't jes' remember seein' sech a long rainy spell sence '61—the year of the flood," the records kept at Northfork show that while the report for January, 1916, was 23.09 inches, that for January, 1914—the year we cut the fire line on the boundary—it was 23.98; for January, 1911, it was 22.68; and in 1909 it was 23.15.

On November 22 the supervisor completed and mailed his report on the construction of the Muir Trail within this forest. It was illustrated with fifty-one photographs, the majority being Mr. Redington's own panoramic views, though some were Ranger Boothe's work. The report was made to the state engineer, who expressed most cordial appreciation of both the work and the report. A copy was then sent to the Sierra Club, which will print a part if not the whole of it in the Bulletin.

With the approval of the district forester, Mr. Redington has sent out several hundred copies of a circular letter to the neighbors in and near this forest, telling what the service is ready to do and what it always has done for the settlers, and inviting co-operation. One feature of the letter was the offer to disseminate throughout the forest and by notice on the district forester's bulletin board information as to land, stock or products for sale by people living within the forest. This letter has been very well received, and already two settlers have listed land and improvements for sale.

Northfork District

January, 1916, has differed greatly from January, 1915. Indeed we have had more snow during this January than we usually have in a whole year. Heavy snows occurred on the 10th and 28th, with so many lighter falls between that the ground has been white most of the month.

We hope not to be snowed in, here at Northfork, many more winters. Certain strangers in the neighborhood are said to be railroad engineers looking up the earlier surveys for the White and Friant Lumber Company, who anticipate cutting in the not-too-distant future, and must first consider railroad possibilities.

The heavy snows and a hard windstorm put our telephone lines out of commission pretty badly. The difference between the bracket lines and the standard swing lines was very noticeable, the standard lines enduring the strain much better.

During the big snow of the 28th of January, small game suffered considerably. Quail and rabbits froze to death, and many quail were noticed who were so cold they could not fly.

Pine Ridge District

District Ranger Price transferred his headquarters from the summer camp at Shaver to the winter office at Auberry, on November 3rd.

District Ranger Price and wife spent the latter part of November and the first part of December at Cascada while Price and Barker built the new barn.

Assistant Ranger Barker and wife moved from Cascada to Auberry about the middle of December and are occupying the district ranger cottage at Big Sandy during Mr. Price's detail to the southern forests for special use reconnaissance.

Kings River District

Ranger Parkinson is serving a six months detail at hard labor on the

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Cleveland Forest. He came back to the Sierra to spend the holidays and brought Mr. Searcey, his district ranger, to show him a real forest. They were only able to get a distant view of the upper country, though, as everything was covered with snow up in the timber.

The Indian service, under the supervision of Mr. Virtue at the Tule River Agency, has opened an Indian school at the old Sycamore Ranger Station. They expect to make a number of improvements there if the attendance at the school justifies them.

Prospects for more business in the Kings River District for 1916 are beginning to loom up. Jay Robinson expects to start a tourist business at Dinkey with hotel, store, pack train, etc. Rumor has it that the Fresno Flume and Lumber Company expects to operate again this season, and newspaper reports are appearing frequently indicating the public sentiment that is in favor of developing the Pine Flat reservoir site. In fact, a movement has already been started to effect an organization of the districts that will be benefited by the reservoir project, so that they can be in a position to get busy with the preliminaries for launching the scheme. In the meantime, we have got to get busy and figure out a scheme whereby the Thermal ranger house can be converted into a houseboat and floated ashore, as its present site will be covered by several feet of water, according to the survey.

New Sorghum Industry at Woodlake Makes Very Successful Beginning and Promises Big

D. L. Wray and Company have started an industry in Woodlake which promises success for another California product in the manufacture of a valley brand of sorghum, known as the "Lake Brand." Until a year ago no pretense was made to supply the home demand with California-made sorghum, fully 90 per cent of the product being shipped from the old South. Last year the Woodlake firm began to supply this demand and manufactured 2000 gallons, made from cane grown from imported seed. The cane was grown on sub-irrigated land in the Woodlake section. The result was a quick growing plant, filled with saccharine, so much so that the equipment had to be changed in the manufacture of the sorghum, from that used in the old South, due to the fact that the syrup became of the proper consistence without so much boiling. The result produced a mild sorghum which instantly became in demand and the supply was soon exhausted.

This year the firm trebled the acreage, enlarged and improved the mills and methods of manufacture, and are producing a superior product to that of last year, and the demand has increased until the product is being taken by merchants of the San Joaquin Valley as fast as it comes from the factory.

Sorghum cannot be classed with the ordinary syrups found on the market. Most of them are the by-products of sugar factories, or are a mixture of some sort, while sorghum is the pure juice of sugar cane, reduced by boiling to the consistency of syrup. Nothing is added and nothing taken away, except the water by evaporation. It is therefore absolutely pure, as sweet as nectar, and has a pleasing flavor that lasts.

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Persimmon Has High Food Value and Can Be Made Into Many Delectable Dishes

Who would have thought of the common everyday persimmon as a fruit of value? Most people have thought of the persimmon as a good bait to tempt some unwary possum to climb the tree on a frosty night and therefore become an easy prey to the hunter. Of course, some few persons have been fond enough of the soft sweet fruit to gather it when cold weather had mellowed it and robbed it of its bitter, astringent taste, but now the United States Department of Agriculture is treating the persimmon with due consideration as a food. The department states in its new Farmers' Bulletin No. 685 that the brown, very much wrinkled persimmon is equal in its value as a food to the date. The bulletin says in part:

"At the present time the most common use for the fruit in the persimmon belt, which extends from Maryland, Virginia, and the Carolinas, westward through Missouri and Arkansas, is as food for hogs. It can, however, be made up into a large number of very palatable products for human consumption. To be on the safe side it is well to add a half teaspoonful of baking soda to each cupful of persimmon pulp whenever the fruit is subjected to heat. This does away with all risk of astringency, the quality in unripe persimmons which produces the well-known puckering of the mouth. If the fruit is perfectly ripe this precaution is not necessary, but as there is always the possibility of some green fruit finding its way into the pulp it is usually advisable.

"The following recipes will be found simple and agreeable:

"Persimmon Cake. One cup of persimmon pulp, half cup of sugar, one egg, one cup of flour, one teaspoonful of baking powder, half teaspoonful of a soft pudding leave out the egg. For soda, butter the size of a walnut. Bake forty minutes in a moderate oven. For a custard leave out the flour and the baking powder.

"Persimmon Bread. One cup of persimmon pulp, one cup of water, half teaspoonful of soda, yeast, shortening, flour to make a stiff dough. Set to rise, mold and bake like other bread.

"Preserved Persimmons. Put a thin layer of sugar in the bottom of a jar, then a layer of whole ripe persimmons, then a layer of sugar, and so on until the jar is full. The sugar will soon dissolve and form a syrup. Press the upper fruits down under the syrup or add more syrup to the jar. Seal and store until used. The syrup may be drained off and the fruits served like dates, which they will resemble very much in both appearance and flavor.

"Persimmon Fudge. Two cups of persimmon pulp, two cups of sugar. Cook over a slow fire, stirring occasionally, until graining begins. Add one teaspoonful of baking soda and stir over the fire until quite stiff. Spread on butter, platter or paraffin paper."

In the German field hospitals electric ovens are being used to bake bullet and shrapnel wounds and thus hasten the wounded soldier's return to the battle front. The disabled arm or leg is placed in the oven, while a nurse keeps watch on the temperature. Some ovens permit the wounded man to so sit that wounds in the abdomen or back are similarly treated.

The Navy Department is planning to construct a new high-power radio station on Puget Sound, probably at Keyport, near Bremerton, Wash. The plant will be one of the most modern stations ever built, and will have towers 400 feet high. It is also reported that another wireless station will be erected on the Copper River Flats, at Cordova, Alaska.

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Molasses Used in New Cattle Fattening Process on Miller & Lux Ranches

Miller and Lux have adopted a novel method for fattening thousands of head of cattle on their big ranches on the West Side. The process is new so far as the San Joaquin Valley is concerned. It is a method used in many parts of the old world, but little known in America, and consists of feed chopped by means of machinery and mixed with molasses. The firm is receiving 11,000 gallons of molasses daily from the Hawaiian Islands. The molasses is hauled from the railroad by 75 horsepower gasoline tractors. Each engine pulls three wagons, aggregating 4,000 gallons per load. The total weight of the wagons is thirty-six tons. The molasses is delivered at the various ranches, at present numbering sixteen. Each ranch is equipped with storage tanks, ranging from 25,000 to 100,000 gallons capacity. The molasses is pumped from the wagons into the tanks by means of a five-inch rotary pump driven by gas engines.

The average amount fed to each animal at the beginning of the fattening period is one-half pound of molasses, twenty pounds of hay, one-half pound of barley, gradually increased until each animal averages four pounds of barley, together with one pound of cottonseed oil and two pounds of rice bran. Usually three parts of water is added to this mixture. The half pound of molasses is equivalent to a twenty-fourth part of a gallon.

Each ranch is provided with its own mixing plant, consisting of a mixer, a mixing tank, supply wagon, screw conveyors, hay carriers and grain elevators. The grain is stored in elevated bins, while the hay is brought into the mixing plant on wagons and thrown on conveyors, where it is fed to the mixer. The barley, rice bran and cottonseed meal is fed to the mixer by the screw conveyors. The water and molasses is previously mixed and pumped into the supply tank, and is sprayed on the ingredients as they pass into the mixer, the whole becoming thoroughly mixed by the time it passes out of the discharge end of the mixer. It then falls into another carrier and is taken out of the building and dropped on wagons, ready to be hauled to the feeding troughs, where the stock eats the mixture with great relish.

It requires 100 days to prepare the cattle for market in this manner. One man operates the mixing plant, and it requires only eight to twelve minutes for a ton of hay and other ingredients to pass through the process. Plants are operated at Henderson, Ortigalitos, Delta, Midway, Devon Arroyo and Belmont in Merced County; Poso, Monte, Central, Durham, Riverside, Holland, Alisol, in Fresno County; and San Juan and Bloomfield, in Santa Clara County. The firm is preparing to extend the industry to Kings County. From 500 to 1500 head are cared for at each station, and in some cases 1000 sheep additional. The feeding process is watched daily by numerous stockmen at the plants in this vicinity.—Merced Sun.

There are twenty uses to which electricity can be put in the dairy, the most important being to operate cream separators, churns, water pumps, milking machines, milk clarifiers, pasteurizers and milk circulating pumps. For example, when using the electric motor for cream separation tests have shown that the cost of separating 300 pounds of milk a day is 2 1-5 cents per hundred pounds when done by electricity; it costs 4 1-5 cents per hundred pounds when done by hand. The complete cost averages about a cent for every ten pounds of butter churned and worked.

In Schenectady, N. Y., out of 18,000 houses only 417 are not wired for electric service.

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VALLEY DEVELOPMENT PROGRSS

Dos Palos is seeking the establishment of a municipal lighting district.

A new packing company has been formed, known as the Lindsay District Packing Company.

The Dairymen's Co-operative Creamery of Tulare is contemplating the erection of a $25,000 plant.

The first car of fancy olives to leave the Porterville packing house this year went to Chicago brokers.

According to figures compiled by the Tulare Board of Trade, 519 acres of new citrus orchard have been planted in the Orange Cove district.

Tulare County supervisors will spend $50,000 this year for road oil in the upkeep of the county highways.

The ten acre citrus orchard of John F. Gorath, west of Terra Bella, has been sold to Henry Bickels for $9500.

Surveying for the subdivision of the 28,000 Perkins ranch and the laying out of a townsite in the Cuyama Valley is now under way.

Many acres of citrus and deciduous fruits are being planted in the Edison and Weed Patch localities in Kern County this season.

A movement is on foot to have a farm advisor and farm bureau in Kings County. Fresno County is also after the same service.

Raisin shipments for February, according to James Madison, vice-president and general manager of the California Associated Raisin Company, were the heaviest in four years.

Three bonding measures are being agitated for popular vote in the coming municipal election in Merced. They are for a municipal auditorium, extensive sewer improvements and a motorized fire-fighting equipment.

The Southern Pacific depot at Dinuba is to be completely reconstructed, and work is to be begun shortly. The company is also laying heavier steel on its foothill branch in anticipation of better service through this rapidly growing part of the valley.

Porterville is to have a modern theater costing $50,000.

Pomelo trees are being shipped from Dinuba nurseries to Texas.

E. M. Sheridan of Los Angeles is planting twenty acres to pomegranates at Orange Cove.

At a rabbit drive at Orosi recently 400 of the pests were killed. Forty hunters engaged in the drive.

Cherry, apple and pear trees are being planted in large number in the Tehachapi country this season.

The Fresno Co-operative Poultry Association has been organized to protect the interests of its members.

According to horticultural inspectors prospects for a heavy peach crop throughout the valley this year were never brighter.

The McFarland district this year has close to 10,000 acres in grains and will plant 3,000 acres to the different varieties of corns.

The civic bodies of Bakersfield are making plans for a big agricultural and horticultural fair in that city the latter part of October.

Fresno County will soon vote on a proposition to issue $3,000,000 worth of bonds to build a highway system of approximately 300 miles in extent.

Heavy rains the first part of March have practically assured the grain crop in the Porterville territory and have done a great deal to further the cattle feed conditions throughout the foothill territory.

C. D. Oldershaw, a Bakersfield nurseryman, began picking early tomatoes for the market February 20th. He expects to harvest a crop of six tons, which bring him fifteen cents a pound, or $300 a ton. Oldershaw grows his vines in hot houses, which cover less than one-fourth an acre. At this rate he has a business that brings him $7,200 an acre. The hot houses are steam heated, kept at a temperature of 35 degrees, and the ground prepared with special fertilizers.

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VALLEY DEVELOPMENT PROGRESS

Work has been resumed on the Blue Mountain gold mines in the hills south of Porterville.

A good magnesite mine prospect has been discovered at Venice Hill, a few miles east of Visalia.

Thirty-five hog breeders of Tulare County have formed the Tulare County Swine Breeders' Association.

A modern pole telephone line, eight miles long, is to be installed for the Plainsburg-LeGrand farming district.

Seventy tons of Calimyrna figs, the aggregate crop of the Bear Creek Orchards, near Merced, sold recently for $172 per ton.

The construction of a modern freight and passenger depot at Earlimart, a prosperous colony on the Southern Pacific right of way near the southern line of Tulare County, has been announced.

D. H. Chapin of Visalia, representing the sugar beet industry, has located in Merced for a number of months to examine soil to determine its adaptability for beet cultivation with a view to establishing the growing of sugar beets in that county.

Marking the inception of a new industry for the Porterville district, work has started on preparing 750 acres of river bottom land south of that city, heretofore idle, for sugar beets, the output of the property being under contract to a Visalia manufacturing concern.

The Sperry Flour Company of Stockton is experimenting with Australian wheat. It has tested twenty-six varieties and found that twelve are exceptionally good for their purpose and will now proceed to progagate the seed on its own farm. The Australian wheat weighs 65 pounds against the prevailing 60 pounds for California wheat. Originally the bulk of the wheat in this state came from Australia. The Australian wheat is drought-resisting, it is said, and will mature in ninety days.

Bakersfield is to have a canning factory this year, H. T. Snuffer and E. J. Martin, two experienced Armona canners, having obtained 22 acres in the outskirts of the city and are now actively engaged in making preparations for the establishment of a cannery. Tomatoes will be handled.

A good roads booster meeting held by Chowchilla and LeGrand citizens recently was to further the movement for completing a good road from Dos Palos, through Chowchilla, Minturn and LeGrand to Mariposa and eventually will form part of the Pacheco Pass route from the coast to Yosemite through the San Joaquin Valley.

The growing of sugar cane promises to develop into an extensive industry in the Visalia district and early in the month a second car of cane reached here from Texas, which will be used for experiment purposes by Visalia farmers this year. Last year a carload of cane was planted in Tulare County and was found to grow successfully, especially along the hills.

With inquiries, traceable to the two expositions last year, still pouring in concerning Merced land, and with land prices reduced and money for development more plentiful, realty in Merced is beginning to boom. Ryan Brothers have purchased 160 acres on the Grogan tract to cultivate in beans. Charles Cunningham of Planada has sold 304 acres on Mariposa Creek. The peach and alfalfa ranch of J. A. Silveira in Franklin district has been bought by E. G. Westberg of San Francisco.

Josiah Gregg of Visalia will give away poppy seed again this year, as has been his custom in the past. Gregg grows poppies extensively on his place near that city, and annually gives away hundreds of packets of seeds in order that vacant lots may be beautified. Gregg also receives requests for seeds from all over the country, most of which he fills if he is able.

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VALLEY DEVELOPMENT PROGRESS

Wesley Ward, a poultryman of Tulare, has an egg laid by a Minorca hen that he claims to be of record size. The egg measures 6 7-8 inches one way by 8 1-2 inches the other.

Dr. George Fitzgerald of Lodi shipped five hundred walnut trees this month to Chile. The trees were packed in damp moss and will be placed in cold storage when they arrive in Chile until the planing season arrives in June.

If present plans materialize Chowchilla will soon have a new creamery built by the California Central Creameries and will be one of a chain of twenty creameries owned and operated by this concern. The creamery was promised upon the provision that the product of 1500 cows was obtainable and the district was canvassed and 1900 were enumerated.

Driver and Driver, who recently purchased 160 acres from the Anchor Vineyard Company east of Dinuba, have leveled and plowed the property and are planting 80 acres to Calimyrna figs and 80 acres to Adriatics. The land lies outside the irrigation district, and wells are being drilled for irrigation purposes. At the time of the sale the purchase price, $200 an acre, established a new record for unimproved land in this section. Since that time sales have been reported at $220. This locality is particularly adapted to fig culture, and a number of small tracts will be set out during the spring. Local nurserymen report the sale of fig trees to be brisk, being chiefly in Calimyrna and Adriatic, with some Kadota and black figs. In this district the average income from a full grown Adriatic or Calimyrna is $7 a year per tree and there are ususlly forty trees to the acre, which gives the grower a gross income of $280. The cost of fig production is slight as compared with other fruits. These facts have done much to stimulate the culture of figs in the Alta district.

The Tulare Co-operative Poultry Association reports its business for January to have totaled $3,800. The association marketed 7,000 dozen eggs for its members, an increase of 1,000 dozen over January, 1915.

Jake Bierer has completed a well on the Sentinel Butte Ranch which promises to be the prize irrigation well of the valley. It is in twenty-five feet of extra coarse water-bearing gravel, and is believed to be in the channel of an underground stream.—Woodlake Echo.

There seems to be considerable interest developing this season in the growing of cantaloupes. A few years ago the Atwater section planted large acreages to cantaloupes but poor markets and one or two backward seasons turned the farmers' attentions to other lines of endeavor. As the growing of cantaloupes in other sections is proving a paying pursuit some of the people here are becoming enthusiastic over them.—Atwater Signal.

One of the largest development projects that has been accomplished in the Alta district is the improvements made on Smith Mountain, known as Haden Heights. There are 240 acres in the tract that is being improved, and most of this acreage is either on the summit or sides of the hill. Water for irrigation purposes is pumped from the level land in the valley below and forced up the side of the hill to a 200 foot elevation in concrete pipes, where it is emptied into reservoirs built on each side of the mountain, and lifted from there 100 feet to the top, and it is again emptied into another reservoir, where it is distributed out to the orchards by a piping system. The base of the hill is planted to vineyard, Emperor grapes predominating, as they are found to be very profitable on account of the dry bog soil and sheltered location. Farther up the hillside and on the summit citrus fruits, olives, figs and deciduous fruits are planted.

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VALLEY DEVELOPMENT PROGRESS

Tuolumne lumber mills will be busier this season than they have been for many years. Many of them are expecting to run both night and day in order to supply the demand. Most of the mills will begin operations about April 1st.

Peach growers are much encouraged over the outlook for the peach market, it being reported that as high as 6½ cents have already been offered for next year's crop. It would seem that the buyers are trying to keep the peach growers' organization from getting any of the crop.

Residents of Selma are questioning the legality of the city ordinance recently passed, which prohibits the retention or building of fences at the rear end of city property. The ordinance was passed under the impression that it would reduce fire risks and make the police better able to watch back doors.

Livingston farmers are in high spirits just now. They see good crops and their accompanying prosperity ahead. This season gives every promise of being one of the most favorable for agriculture in recent years. Bumper crops are forecasted. And the best of it is that the acreage to grain is considerably larger than usual, this being especially true of alfalfa. The weather conditions are ideal. All fear that the prolonged heavy rains of January would permanently hinder the growth of grain is now removed from the minds of the farmers because of the recent warm weather, with an occasional fog to insure enough moisture to offset possibly too much heat. Grain that was slow starting or late planted now is shooting up rapidly, and with plenty of strength and color. The farmers believe that the late grain will be as good as had different weather conditions made it early grain, and when this condition is possible it is usually desirable.—Livingston Chronicle.

Owing to the supply of almond trees running out, planting has been stopped at Oakdale. The Stanislaus County horticultural commissioner states that more almond trees have been planted in that section this season than ever before. California and Oregon nurseries are unable to supply any more trees this season.

Orange growers in the Lindsay and Colton citrus fruit districts of California showed a ratio of 12.6 per cent of soluble solids to every 1 per cent of acids, in chemical tests of the fruit which were made in connection with the Sixth National Orange Show. The prize for the best showing in this regard was awarded to Colton on the toss of a coin. Other tests made indicated, is was stated, that the California orange crop this year measures considerably above the government standard of eights parts soluble solids to every part of citric acids.

Minimum wages and regulations in the fruit and vegetable canning industry for women and minors have been fixed by the Industrial Welfare Commission of California as follows: Piece work, ranging from 3 cents per 12 quart bucket for cutting tomatoes, to 15 cents per 40 pound box for cutting pears; 1½ cents per dozen for canning fruit in 2½ pound cans, and 3 3-5 cents per dozen for 10 pound cans; tomato canners, 2 2-5 cents per dozen for 10 pound cans, and 1 cent a dozen for 2½ pound cans. Minimum rates for time workers, 16 cents per hour for inexperienced help; maximum number of hours for minors under 18 years, eight in any one day or forty-eight in any one week; maximum hours for adult women, ten hours a day, sixty hours a week, except in emergency; one and one-fourth time for overtime; records of work done to be kept; minimum standards of conditions under which women may be employed are fixed; orders to be posted in every cannery.

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VALLEY DEVELOPMENT PROGRESS

Union stock yards and a co-operative meat packing plant for Fresno are now being agitated. This suggestion was made some time ago by the stock men of the San Joaquin Valley.

A petition is being circulated in Alpaugh for the purpose of calling an election to vote bonds in the sum of $283,000 for acquiring all the canals and rights of the Second Extension Water Company, to be used in irrigating lands of the Alpaugh Colony.

State Superintendent of Weights and Measures Charles G. Johnson has recently issued an order that berry containers used this season shall be divided into four classes, half pound, three-quarter pound, pound, and two pound containers. Containers shall be packed to contain berries in the foregoing weights and no other. The superintendent also issues a ruling to the effect that when olives are sold, the net weight of the olives shall be marked, exclusive of the brine. He asserts that in many cases it has been found that where the net contents were designated, half of the weight was that of the brine.

With the most remarkable campaign among producers of California that has ever been made, the raisin industry has been saved in the preservation of the California Associated Raisin Company, the co-operative association of 7,500 growers. President Wylie M. Giffen of Fresno has issued a statement to the growers announcing that the satisfactory results of the campaign so far have brought about the decision of the company to continue the contract plan, and notices will be sent out to every grower of the exercise of the option of the company. More than 15,000 acres have been signed up in the campaign. The 4,000 acres asked for in ten days in the statement of the company of March 1st, were not quite secured, 3,300 being signed up in the last ten days.

Geo. A. Smith has just shipped into Imperial Valley three cars of stock, valued at $15,000—two cars of registered Holstein and one of Poland China hogs, to be offered under the hammer at El Centro on the 15th of this month.—Corcoran Journal.

The Santa Fe Company has issued a very attractive booklet showing views of many scenes in the San Joaquin Valley which were taken during the visits of the homeseeker excursionists last fall. They include views of the dam and headgates on Kings River above Sanger. The booklet is one that will attract many people to this section, as it contains many letters from excursionists giving their impressions of the country as they saw it.

Official notification from the authorities of the Panama-Pacific Exposition was received by the Chamber of Commerce today that Sol Shockley of this city was voted the silver medal by the jury of awards for an exhibit of Merced grown cotton shown in the San Joaquin section of the Palace of Agriculture.—Merced Sun.

An interesting feature of the report of the State Industrial Accident Commission, now in the hands of the State Board of Control, is that between 9000 and 10,000 farmers and dairymen have thus far elected to take advantage of the provisions of the industrial accident law. Farmers and dairymen are not compelled to take out insurance for their employees, the law making it optional with them. However, the provisions whereby, for the payment of $7 a year for each of their employees, they are relieved of all liability of damages from civil appeals to them, are in effect and are attracting these classes. The law became effective on January 1, 1914. Up to June 30th of that year 2820 farmers and dairymen had elected to come under its provisions, and during the following year 4038 more "came in." The total number is now close to 10,000.

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VALLEY DEVELOPMENT PROGRESS

San Joaquin Valley raisins, figs and other dried fruits are placed at a better advantage in the Florida, Montana and South Dakota markets with the reduction of rates on carload shipments, which became effective at the first of the year.

San Joaquin County now has 330 miles of paved highways radiating from Stockton to all parts of the county. At an election held in March, 1909, by a big majority, a bond issue of $1,899,000 was voted for the construction of 238 miles of main roads with permanent culverts and bridges. Work was started the following October. Since the completion of construction within the provisions of the bond issue nearly 1,000 additional miles of roads have been built.

The largest acreage planted to grain in the history of California is in the San Joaquin Valley this year. The acreage is even greater than the amount in the '70s and '80s, when the valley was known as the world's greatest wheat section. In the south there are large sections of wheat. The major part of the land is planted to barley, for which there is a strong, steady demand in Europe. Between Tracy and the Tehachapi on the west side it is estimated there is a 50 per cent increase in the grain acreage, with a total of 650,000 acres. On the east side the increase is estimated at 25 per cent, with a total of 350,000 acres. Much of the new land is virgin soil, having been used heretofore for grazing. Grain dealers say that most of the land has been sown to barley, with large wheat areas in the south. They estimate a 50 per cent increase in the grain acreage on the west side between Tracy and the Tehachapi, with a total of 650,000 acres, while the east side is estimated to have shown a 25 per cent increase over last year, with a total of 350,000 acres, making a grand total of 1,000,000 acres planted to 1916 grain.

Mrs. W. R. Bibby has a Rhode Island Red hen that lays a double-yolk egg every other day, as a rule. On Monday she celebrated St. Valentine's Day by laying an unusually freakish egg. It was as large as a goose egg, and upon breaking it Mrs. Bibby found within the shell another fully formed egg of normal size with natural shell which was surrounded by the white (but no yolk) of the larger egg. It is on exhibition at the Bibby hardware store.—Los Banos Enterprise.

The orange is California's leading fruit, with the peach a close second, according to George P. Weldon, deputy state horticultural commissioner. There are 168,543 acres of orange trees in the state, 144,888 acres of peach trees, 116,244 acres of prunes, 60,840 acres of apples, 55,451 acres of apricots, 54,815 acres of walnuts, 36,670 acres of lemons, 34,075 acres of almonds, 37,428 acres of pears, 27,216 acres of olives, 22,161 acres of plums, 12,462 acres of cherries, 10,580 acres of berries, and 8,122 acres of figs. This report shows that 789,405 acres of land in California are devoted to fruit growing, and of that total acreage 543,203 acres produced fruit in 1915. Santa Cruz County stands far in the lead in apple tree acreage with 16,000, Santa Clara County leads in apricots with 8,826 acres; Los Angeles County in berries, 4,296 acres; Santa Clara County in cherries, 2,862 acres; Fresno County in figs, 2,919 acres; Los Angeles County in lemons, 8,659 acres; Butte County in olives, 4,000 acres; San Bernardino County in oranges, 41,107 acres; Fresno County in peaches, 35,000 acres; Sacramento County in pears, 5,000 acres; Placer County in plums, 5,500 acres; Santa County in prunes, 58,406 acres; Los Angeles County in walnuts, 15,441 acres; Yolo County in almonds, 4,600 acres. Santa Clara County, with 82,736 acres of land in fruit trees, leads all counties of the state.

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Independent Oil Producers' Agency Report of California Oil Operations

Following is the February report of the production and field operations of the California oil districts as prepared by the Statistical Department of the Independent Oil Producers' Agency at Los Angeles:

District	Rigs Up	Drilling	Completed	Abandoned	Producing	Gross Barrels	Daily Averages February	Daily Averages January	Daily Averages 1915
Kern River	..	9	3	2	1,476	683,756	23,578	23,291	22,177
McKittrick	1	1	3	6	264	223,651	7,712	6,230	9,824
Midway-Sunset	19	46	20	1	1,237	2,879,698	99,300	98,094	108,554
Lost Hills-Belridge	6	20	7	..	271	343,824	11,856	11,266	11,810
Coalinga	3	15	1	..	712	779,297	26,872	30,922	37,171
Santa Maria	1	7	1	..	239	341,755	11,785	10,856	12,311
Ventura-Newhall	3	20	1	1	438	86,471	2,982	2,974	2,817
Los Angeles-Salt Lake	..	..	..	..	697	155,130	5,349	4,862	5,738
Whittier-Fullerton	4	58	5	1	604	1,024,466	35,326	35,127	35,273
Summerland	..	..	..	..	102	4,500	155	145	153
Total	37	176	41	11	6,040	6,522,548	224,915	223,767	245,824
January	15	167	38	23	6,142	6,936,785	223,767		224,915
Difference	22	9	3	12	102	414,237	1,148		20,909

Shipments and Stocks

Stocks February 1st, 1916	55,950,804
February Production	6,522,548
Total	62,473,352
February Shipments	7,193,499
Stocks March 1st, 1916	55,279,853
Stocks Decreased February	670,951
Stocks January 1st, 1916	55,977,180

Daily Averages

DAILY	February	January	1915	1914
Production	224,915	223,767	245,824	281,841
Shipments	248,051	224,618	252,076	258,825
Shortage	23,136	851	6,252	*23,016
Oil Shut In	10,000	15,000	18,000	18,500
Potential Shortage	13,136	*14,149	*11,050	*41,516

*Surplus

Forecasts as to the probable effect of the big windstorms late in January on the February output of crude petroleum in the California oilfields are shown to be erroneous by figures made public by the statistical bureau of the Independent Oil Producers' Agency at Los Angeles. Instead of suffering a loss of from 20,000 to 30,000 barrels per day as was generally thought likely, the agency resume for February indicates that production of oil in the state during the second month of the year was practically the same as the first month on a daily average basis. The daily average output in February is given at 224,915 barrels, as compared to a daily average in January of 223,767 barrels, or an increase of 1,148 barrels daily.

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Crude Oil Prices at the Well

San Francisco, Cal., March 14, 1916

Effective Feb. 16, 1916, Standard Oil Company offers the following prices for crude oil at the well:

San Joaquin Valley Fields

(Kern River, Midway-Sunset, McKittrick, Lost Hills-Belridge, Coalinga)

14 degrees to and including 17.9 degrees gravity ..... Per bbl., $0.53
18 degrees to and including 18.9 degrees gravity ..... " .54
and for each increase in gravity of one (1) full degree above 18.0 degrees gravity, one (1) cent per barrel additional.

Ventura County

25 degrees to and including 25.9 degrees gravity ..... " .67
and for each increase in gravity of one (1) full degree above 25.0 degrees gravity, one (1) cent per barrel additional.

Whittier-Fullerton Field

16 degrees to and including 17.9 degrees gravity ..... " .53
18 degrees to and including 18.9 degrees gravity ..... " .54
and for each increase in gravity of one (1) full degree above 18.0 degrees gravity, one (1) cent per barrel additional.

Proven Oil Territory in California

California added but little to its proven oil acreage in 1915. The McKittrick field remains by far the most productive area per acre in the state, and it made the largest gain per acre during the year. In the table that follows, which is printed by courtesy of the Standard Oil Bulletin, the proven area includes only producing territory, and entirely disregards unproven areas generally regarded as oil lands. In cases of single outlying wells, about fifteen acres are classified as proven.

California Crude Oil
Proven Area and Total Production
December 31, 1915

FIELD	Proven Acreage	Total Production to Dec. 31, 1915 (Barrels)	Total Barrels Produced per Acre to Dec. 31, 1915
Kern River	7,650	181,747,075	23,760
McKittrick	1,345	45,631,573	33,930
Midway-Sunset	36,800	216,336,533	5,880
Lost Hills-Belridge	3,095	17,278,295	5,580
Coalinga	14,440	166,552,695	11,530
Lompoc and Santa Maria	7,900	70,692,981	8,950
Ventura County and Newhall	4,190	17,616,305	4,200
Los Angeles and Salt Lake	2,700	49,679,079	18,400
Whittier-Fullerton	3,700	82,748,993	22,360
Summerland	230	2,066,989	8,990
Miscellaneous	*200	909,902	4,550
Total	82,250	851,260,420	10,350

*Estimated

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The Latest Movie Sensation—"Do It Electrically"—A true-to-life story of every day occurrences in the household. Here is a movie film on paper. Read across the page and discover the happy solution. More interesting than "The Perils of Pearline."

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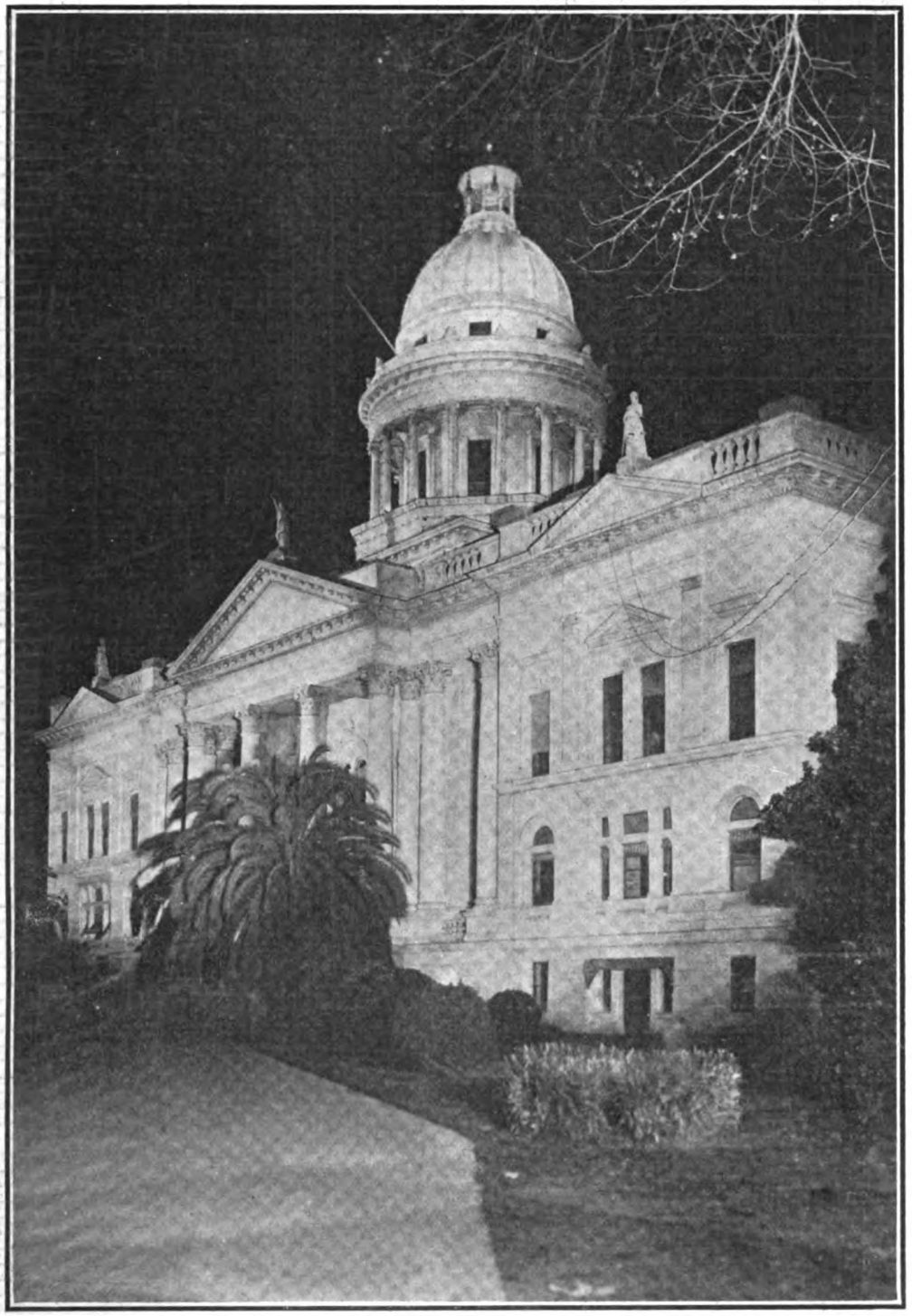
Night View of Fresno Court House Lighted By Flood System of Illumination



To demonstrate the beautiful effect possible by the new system of flood lighting for public and business buildings, the San Joaquin Light and Power Corporation lighted the County Court House building in Fresno for several nights the early part of the month, and the result was particularly striking.

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San Joaquin Light & Power Magazine

Published in the Interest of the Consumers and Employees of the San Joaquin Light and Power Corporation.

I. W. ALEXANDER, Editor and Manager

Published by the San Joaquin Light and Power Corporation, Fresno, California.

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VOL. II MARCH, 1916 NO. 3

An Appreciation of Our Service Well Rendered

(Gustine Standard, February 25, 1916)

When a public service corporation breaks down from any cause, whether it be from neglect, carelessness of employees, floods, fires or storms, it is very common custom for us to cuss them for inconveniencing us, but when the service is always there, the train comes on time, the lights come when we push the button, or things go on in their usual way we never give a thought or a thank to the man who by their skill and forethought and energy make it so. We say this with special reference to the service given this valley by the San Joaquin Light and Power Company, which furnishes the "juice" for this town and surrounding country. Only twice during this hard winter, when floods and storms have raised havoc with rail and wire service in every part of the state, has the lines maintained by this company failed us, and then for only a few hours at a time. The Standard thinks that the company has done well, and that we should all feel that the employees and managers of the company have been attentive to their duties, and careful of the interests of those who are dependent upon them for light and power, and deserving of our thanks for their efficiency. This is not an ad. but an appreciation.

Goods Roads Save Farms, Say the Bankers

"We have never foreclosed a loan on a farm situated on a rock road."

This astonishing statement is credited to W. S. Webb, a Kansas City banker, in an article on good roads in a recent issue of the Country Gentleman, Mr. Webb also said:

"We bankers will lend ten or twenty-five dollars an acre more on a farm situated on a rock road. Suppose the land is set down at $40 an acre. If it is located on a rock road over which the owners can haul crops any month of the year, the banker will add ten dollars an acre for that item. Probably the building will not come to more than ten dollars an acre, so the hard road is worth as much as the building in actual money. The total selling value of that farm is $60 per acre, and the banker will lend thirty."

The above will furnish a little food for thought for those interested in the present agitation for a system of good roads throughout the San Joaquin Valley.

Safety and the Office Man

Have you ever stopped to think that the Safety Movement applies to the office man as well as to the workman? There is merely a difference in the chance of accident. The possibility of an injury to an office man is not as great as to the workman, but this difference is offset in other ways. The office employee is indoors day after day, year after year. His mind may be active but his muscles become soft—he does not get proper exercise or sufficient fresh air. Without exercise and without fresh air the body is weakened; it cannot resist the disease germs; it is more liable to cold, penumonia, etc. Therefore, Safety First to the office man means that he must keep his health—he must get exercise, sleep with his bedroom windows open. Without health he is unable to produce and his job gradually gets too big for him.

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Everybody should think and practice Safety First—there are no exceptions. The sooner this is done the sooner will the number of accidents decrease and healthful living conditions exist.

Announce State-wide Dairy Cow Competition

Who has the best cows in California? The University of California wants to find that out, and to demonstrate how much better good cows are than poor ones. So the College of Agriculture is considering the inauguration on the first of next November of "State Dairy Cow Competition." It is planned to continue the competition for sixteen months. It will be open not only to pure-bred but also to grade and to common cows, and a number of different prizes will be awarded for butterfat production during any ten continuous months of this period. Prizes aggregating several thousand dollars have been offered. The prize list, however, will be held open until July 1, so that any other persons or firms who wish to offer such contributions to the list of prizes may have opportunity to subscribe. A circular in which the university will officially announce this competition and for the first time make public the list of premiums offered will be issued by the College of Agriculture of the University of California about August 1st, 1916.

Uncle Sam Advertises For Better Citizenship

"America First" is the title of a striking lithographic poster just issued by the Federal Bureau of Education, urging immigrants to fit themselves for citizenship.

It is one of the very few advertisements ever published by the government, and probably the only pictorial appeal ever issued outside of those advertising army and navy recruiting and of the parcel post.

"Learn English; attend night school; become a citizen," it says. "It means a better opportunity and a better home in America. It means a better job. It means a better chance for your children. It means a better America."

The words are printed in Italian, Polish, Yiddish, Lithunian, Bohemian, and Hungarian.

The bureau has found that there are in the United States three million foreign born folk ten years of age and over, who are unable to read or speak English, and that more than one-half are unable to read or write any language.

The posters use color lavishly.

"America's Electrical Week"

"America's Electrical Week" has been selected by the Campaign Executive Committee of the Society for Electrical Development as the official name for the great electrical celebration, December 2 to 9, 1916. A start has already been made on the nation-wide campaign which, from every indication, will surpass even the wonderful results accomplished by the 1915 "Electrical Prosperity Week."

The name "America's Electrical Week" was chosen this year because of its timeliness, the patriotic thought it conveys, the national aspect the name indicates, its euphony, and its appeal to every citizen. The date is practically the same as that of last year, which was generally conceded to be the best time of the year as it began the Christmas drive for big business.

"Electrical Prosperity Week" was again considered for the name, but while it splendidly served its purpose last year with prosperity as the theme, this year it was thought it would be advantageous to use a different name.

Many new sales and publicity features will be introduced in the plans for the 1916 electrical week. The electrical industry knows what can be done by a concerted drive for business, and other business interests and the public at large have learned of the tremendous possibilities of an annual Electrical Week.

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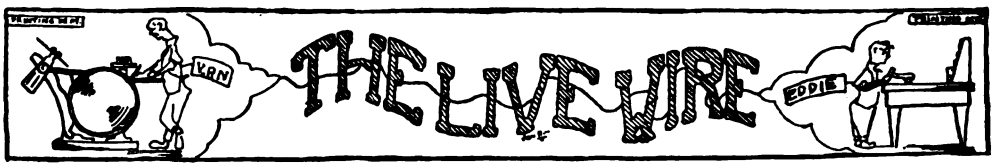

Short and Pithy

"Dat wasn't a bad epigram of de judge's," said Plodding Pete.

"What did he say?"

"Thoity days."

"Dat ain's no epigram, is it?"

"Sure it is. I asked a fellow what an epigram is, an' he says it's a short sentence dat sounds light, but gives you considerable to think about."

Rapid Transit

An earnest clergyman one Sunday morning was exhorting those who had anxious and troubled consciences to be sure and call on their pastor for guidance and prayer.

"To show you, my brethren, the blessed results of these visits to your pastor," said he, "I will state to you that only yesterday a gentleman of wealth called upon me for counsel and instruction; and now, today, my friends, he sits among us, not only a Christian but a happy husband and father."

A young lady in the audience whispered to a matron: "Wasn't that pretty quick work?"

What a Crash

"I had a dreadful fall last night."

"Tell me of it, Egbert."

"My wife was talking; I hung on every word, and then, and then—"

"Yes, yes, and then?"

"Her voice broke!"

Outguessing Style

Mary had a little waist,
'Twas puzzling to her beau,
For everywhere that fashion went,
Her waist was sure to go.

Sometimes it was beneath her arms,
Sometimes below her knee,
Sometimes she had no waist at all
So far as he could see.

"He Should Worry"

Chief Clerk (to office boy): "Why on earth don't you laugh when the boss tells a joke?"

Office Boy: "I don't have to; I quit on Saturday."

Rubber-neck!

The conductor was about to give the motorman two bells to go ahead. "Wait!" shrilled an unmistakably feminine voice, "Wait till I get my clothes on."

Whereupon seventy-three men and thirty-seven women turned to rubber.

A fat woman lifted her basket of laundry aboard. The car went on.

Wandered In

Parson: "I was glad to see you at prayer meeting last night, brother."

Village Souse: "Was that where I was? Well, I be jiggered!"

To a Fine Point

A society leader employed a new footman. "You understand your duties thoroughly, don't you?" said his mistress. "Yes, ma'am, certainly, ma'am," said the new one. "And you know your way to announce?" "Well, ma'am, I shouldn't perhaps like to go quite so far as that, but I think I know my weight to a pound or so."

De Janitor Am De Boss

"Suppose we have a house-warming, John," said the woman who likes to entertain.

"This ain't a house. It's a flat," replied her husband, irritably.

"But that doesn't prevent having a house-warming."

"Yes, it does, as long as the janitor feels the way he does about it. If you want me to celebrate this happy little home in an appropriate manner I'll invite some friends around and we'll play freeze-out."

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Why the Patriotism?

"Does your wife show any interest in the war?"

"Yes, indeed. She talks about it."

"What does she say?"

"Why, she says that she wishes I could go."

His Early Morning Task

Not all city folks are as ignorant of the conditions on the farm as some farmers are apt to suppose. A Bostonian who was spending his vacation on a farm in Maine, had resolved to rise with the birds, in order to get the full advantages of the rural life.

"Well, young man," said Farmer Hitree as the city chap hove in sight, "been out to hear the haycock crow, I suppose?"

The city man smiled. "No," said he, "I've been out tying a knot in a cord of wood."

What the Farmer Did

A city man recently visited with his "country cousin." The man from the city, wishing to explain the joys of metropolitan life, said: "We have certainly been having fun for the last few days. Thursday we autoed to the country club and golfed until dark, then trollied back to town and danced until morning."

The country cousin, not to be outdone in the least, began telling some of the pleasures of the "simple life."

"We have had pretty good times here too. One day we buggied out to Uncle Ned's and went out to the back lot, where we baseballed all that afternoon. And in the evening we sneaked up to the attic and pokered until morning."

A sturdy old farmer, who was listening and who was not to be stumped in the least, took up the conversation at this point and said, "I was having some fun about this time myself. I muled to the cornfield and gee-hawed until sundown. Then I suppered until dark and piped until eight o'clock, after which I bedsteaded until the clock fived, after which I breakfasted until it was time to go muling again."—Judge.

A True Prophet

One of the attractions of the church fete was a fortune-teller's tent.

A lady took her ten-year-old, red-haired, freckled son inside. The woman of wisdom bent over the crystal ball.

"Your son will be a very distinguished man if he lives long enough!" she murmured in deep, mysterious tones.

"Oh, how nice," gushed the proud mother. "And what will he be distinguished for?"

"For old age," replied the Fortune-teller slowly.

Taking No Chances

One day a young Cleveland bachelor who is always generous with his car, offered to take downtown the old colored janitor of the apartment house in which he has lodgings.

"No, suh, boss—no, suh, thank you, suh," said the ancient functionary, with a grin. "I reckon I'll wait and go on de street cyah."

"What's the matter, uncle? Are you afraid?"

"No, suh—me afraid? No, suh, I got to wait."

"Uncle, have you ever been in an automobile?"

"Nevah but oncet, and den I didn't let all ma weight down!"

Still Good

Amos Whittaker, a miserly millionaire, was approached by a friend who used his most persuasive powers to have him dress more in accordance with his station in life.

"I am surprised, Amos," said the friend, "that you should allow yourself to become shabby."

"But I'm not shabby," firmly interposed the millionaire miser.

"Oh, but you are," returned his old friend. "Remember your father. He was always neatly, even elaborately, dressed. His clothes were always finely tailored and of the very best material."

"Why," shouted the miser, triumphantly, "these clothes I've got on were father's!"

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What Eight Great Men Did for Electricity

Beginning a series of E-lecturettes dealing with the lives of pioneers in electrical research and how each contributed to the development of electricity. The men are Alessandro Volta, Andre Marie Ampere, George Simon Ohm, James Watt, Michael Faraday, Lord Kelvin, Benjamin Franklin, and Thomas A. Edison. Their stories will appear, in the above succession, one at a time in following issues of this Magazine.

No. 2
ANDRE MARIE AMPERE

The Ampere, Unit of Electric Current Strength

The many queer but familiar names by which electricity is measured and distributed are generally puzzling to the housewife and to those who have not had an opportunity to study the various uses of electric energy. Since electricity is not a substance it adds neither weight nor size to the wire through which it flows, carrying light, heat and power.

Electrical measurements are generally based on three units—the volt, the ohm and the ampere. These terms, you were told in the first E-lecturette, are the names of great pioneers in electrical research. As you have learned, the volt is the unit of pressure of electricity, so you will be told in this E-lecturette how the ampere is the unit of the quantity of flow of electric current.

The ampere receives its name from Andre Marie Ampere, a great French scientist and philosopher, who was born at Lyons, France, January 22, 1815. All his life Ampere worked over experiments in electricity. He discovered so many important facts about electricity that it was a fitting tribute to his industry that his name has been immortalized. Maybe long after Napoleon and Washington are forgotten Ampere will live on the lips of legions of persons who have to do with electricity.

The chief source of Ampere's fame for future generations is in his researches in the science of electrodynamics, of which he was the father.

To obtain an illustration of what an ampere means we may turn to the electric light in our homes. An ordinary sixteen candlepower incandescent lamp with carbon filament, when lighted up on a 110-volt line, will take one-half ampere of current. A Mazda lamp gives approximately three times as much light with the same amount of current, thus making the cost of light to the housewife much lower.

Like all the great electrical inventors, Ampere at an early age displayed wonderful talents. He was blessed with a marvelous memory, and it is said that when he reached an advanced age he was able to quote long passages from books he had devoured when a boy of thirteen years. Back in those youthful days he had set himself about reading a twenty volume encyclopedia. Everything was grist that came to the boy's mental mill.

Ampere early developed a fondness for arithmetic, and before he knew how to read or write he invented a method of doing problems by the aid of several pebbles.

During an illness the boy was limited to a meager diet. His continual study of problems caused his mother to take the pebbles from him. Ampere, not to be deprived of this form of mathematics, substituted breadcrumbs from his limited allowance of biscuit.

As he grew into boyhood Ampere became more precocious, and his passion for learning was so great that his mind soon outgrew the ample family library. His continued neglect of exercise and companionship of boys of his own age

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soon undermined his health, and he was forced to forego his beloved studies. Despite his physician's warning's, he took up again his work in higher mathematics and Latin. He progressed so rapidly that he mastered Latin in a month!

This tremendous drain on his mental resources, combined with the news of his father's death at the hands of the French revolutionists, broke the boy's health, and for a time his reason was thought to have left him permanently. But, strange as it may seem, his recovery was due to concentrated thought on his part. The story has it that one day purely by chance some "Letters on Botany" came into Ampere's hands, and because of his intense interest in the book his reason was awakened once more. Among his various attainments he became professor of mathematics at Lyons and later professor of physics at Bourg.

Later Ampere published many learned papers and books and lived to a ripened old age. And so Ampere took his place with other studious men who as boys were great searchers for information about electricity and other scientific subjects. It is little wonder that these great men have been so honored when we recollect that electricity has come to be one of the most important factors in our lives. We have only to compare what history says of the lives and customs of the people who lived a hundred years ago with the advances of civilization today to understand how much better a place the world is to live in since electricity became our servant.

(Next E-lecturette—The Ohm, Unit of Resistance.)

Some of the Uses for Electricity in the Home

Every day, seemingly, we read of some new application of electricity in the home. The number of household tasks turned over to electricity in the past few years is astonishing. An engineer of the General Electric Company has prepared the following list of household applications of electricity which is truly astonishing:

Furnish illumination for the house.
Heat water for shaving, or the bath.
Percolate the breakfast coffee.
Toast bread.
Fry eggs or anything that will fry.
Operate the sewing machine.
Iron the clothes.
Make the tea in a samovar.
Cook food in a chafing dish.
Curl a woman's hair.
Dry a woman's hair.
Heat the bath room or other rooms on cool mornings.
Lift or lower dumb waiters.
Energize doorbells and annunciators.
Vibrate the massage vibrator.
Ozonize (purify) the air.
Wash the dishes.
Ignite cigars.
Keep hot the heating pad (used in place of hot water bottle).
Warm the milk for baby day or night.
Pop corn.
Amuse the children by running electric toys.
Protect houses from burglars.
Give electric baths in bath cabinets.
Poach eggs, cook the cereal, or heat milk.
Operate the washing machine and clothes wringer.
Run the vacuum cleaner.
Cool rooms with an electric fan.
Knead the bread and bake the bread.
Purify the drinking water.
Grind, mix, churn, whip cream, make ice cream, polish silver, etc.
Carry the family in the electric automobile.
Warm an electric blanket for outdoor sleeping.
Polish the floors (electric floor polisher).
Sterilize water or utensils.
Make ice—furnish refrigeration.
Play the piano.
Mix family beverages.

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"Sure Pop and the Safety Scouts"

ADVENTURE NUMBER FOURTEEN

Six Timely Tips

(Copyright 1915 by the World Book Company, Chicago, Illinois. Reprinted by permission of the publishers from "Sure Pop and the Safety Scouts." The book sells postpaid for 42 cents and may be purchased from Cunningham, Curtiss and Welch, Los Angeles, or from H. S. Crocker, San Francisco. The adventures of "Sure Pop" printed in these columns are numbered as they appear in the book and not as to their sequence here.)

Sure Pop and Uncle Jack were sprawled out side by side on the green river bank, talking over old times. Bob and Betty were hanging on every word.

"My first few months of Safety work among American factories and mills," Sure Pop was saying, "was largely planting. I planted the Safety First idea and gave it time to grow. I began with the steel mills; then I turned to the railroads, then to the woodworking shops, and so on."

Uncle Jack gazed thoughtfully at the sparkling river. "Well," he said at last to Sure Pop, "what results and how?"

"How?" repeated the little Colonel. "First, by putting the idea, Safety First, into the mind of every workman we met. Second, by whispering in his ear new ways of cutting out accidents—after the Safety First idea had had a chance to sink in. Results? Three-fourths of the deaths and injuries in the steel mills were cut out entirely in six years' time; in the railroads, the number of accidents was cut squarely in two in three years' time; in other kinds of work—all except one—big reductions all along the line."

"Great!" There was no mistaking the admiration in Uncle Jack's voice. "What about the one exception—what line was that?"

"It's a certain class of mills that is practically controlled by one man, a very able man, but exceedingly self-willed and stubborn. He owns a chain of mills from coast to coast, and the rest of the manufacturers in his line follow his lead in everything. He has fought the Safety First idea from the start—calls it 'one of these new-fangled notions'—will have nothing at all to do with it—and he has held back the Safety movement in his whole line of work."

"Hm-m-m! Hard nut to crack, eh? What's the old codger's name?"

"Bruce. He's done more to handicap Safety work than any other man in the country—and I do believe he's proud of it," said Sure Pop, grimly.

"Bruce—isn't that the man your father works for, Bob?"

Bob nodded. "He has a heart, though"—and he told them how the mill owner had come to Chance Carter's aid, and how like a different man he had seemed when little Bonnie threw her happy arms around him.

"Queer mixture, isn't he?" said Uncle Jack.

"Yes, he is. But don't you suppose our patrol could do something to change his mind?"

Uncle Jack waved the idea aside. "Forget it, Bob, forget it! Don't lose sight of what the Colonel told you Scouts yesterday about the right way to go at things. Well, the right way to go at Bruce is to leave him alone for a while. If he's as prejudiced as all that, interfering would only make him worse. He'll come around by and by, won't he, Colonel?"

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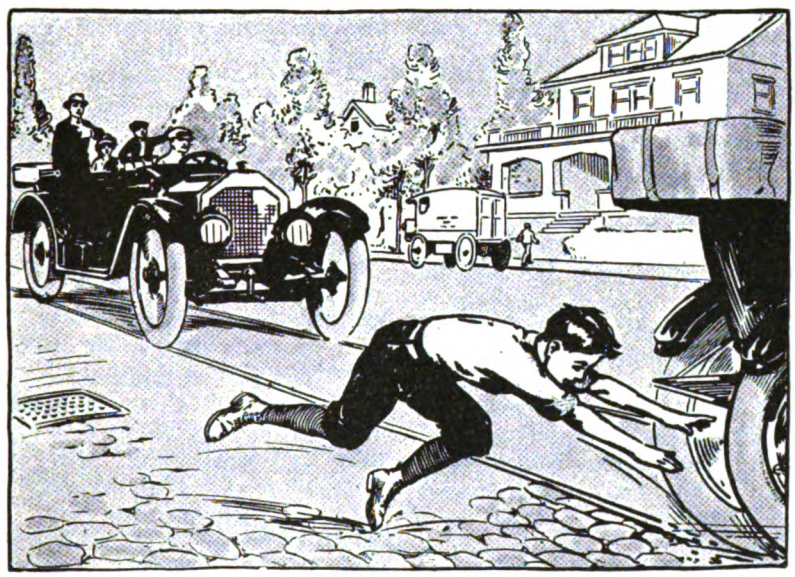
"All in good time," said Sure Pop. "Your work is cut out for you, Bob, as I told you yesterday. Get the Safety First idea well rooted in the homes, and then we'll begin on the streets, and get folks in the habit of thinking Safety every time they cross the street."

Uncle Jack yawned and stretched himself.

"Can you spare these twins of ours for the day, Colonel? I've a frolic of my own I want to borrow them for, if I may."



"Sure pop! Go ahead, sir."

Uncle Jack stepped across the street to a telephone, and the first thing Bob and Betty knew, a big red automobile drew up beside them. "Jump in, folks —look out for my arm, please. Now —we're off! Goodby, Colonel."

"My, but isn't this glorious!" Betty nestled closer to her uncle as they sped along toward the shopping district. "Is this your car, Uncle Jack?"

"For today it is," laughed her uncle. "Today we'll just make believe I own the mint. Careful there, driver!"

Forgetful of his lame arm, he jumped to his feet and waved his hand in warning. They had been running smoothly along the car tracks, and another automobile had cut in ahead of them from around the corner. A tow-headed lad of about Bob's age, who was stealing a ride on it, holding himself on by main strength as the automobile jounced along over the crossing, had just made up his mind he would ride no farther and was getting ready to jump. Down he came, kerflop, in the street, stubbing his toe as he tried to catch his balance.

Uncle Jack's chauffeur, warned by his shout, gave the steering wheel a quick turn—and cleared the boy by a hand's breadth! Uncle Jack sank back on the cushions, his eyes flashing.

"Reckless young rascal! Trying to make murderers of us, is he? What are you Safety Scouts going to do about the boys' hitching on like that, Bob?"

Bob pulled a notebook out of his pocket. "Here's how Sure Pop has

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summed up our patrol reports on street accidents. He calls it—

"Six Timely Tips on Street Safety

"Tip 1: Make the street car stop before you step on or off—the car can wait. But step lively!

"Tip 2: Face forward in getting off. Hold the grip iron with your left hand —it's a friend in need. Left foot to the step, right foot to the ground, eyes front!

"Tip 3: Before leaving the car, look both ways for automobiles, wagons, and motorcycles.

"Tip 4: In passing behind a car, first peek around to see what's coming. When carrying an umbrella, peek around that, too.

"Tip 5: Before you hitch on or steal rides on street cars, automobiles, or wagons, better make your will.

"Tip 6: Keep wideawake in getting on and off cars and in crossing streets. Walk fast, but don't run. Use all the sense you have; you're likely to need it and to need it quick!

"Those six tips are not guesswork either, Uncle Jack. They're boiled down from weeks of street scouting by every boy and girl in our patrol."

"Those are good, sensible tips," said his uncle. "What use are you going to make of them?"

"Well, by the time vacation's over, we will have a special School Safety Patrol drilled and ready to get down to business on this particular work among the youngsters—to get them out of the habit of hitching on, and that sort of thing. Our idea is to begin with the smaller school children; there have been a good many bad accidents to them, you see, going to and from school. Most of them have to cross the tracks; it's altogether too easy for them to get confused and run down by a street car or engine or auto."

"That's right, Bob. How are you going to stop it?"

"Why, each Scout in the School Patrol takes charge of the school children in his block for one month. It's his job to get them together at a convenient corner in the morning, then herd them across the tracks and through the crowded streets to school; to do the same thing on their way home; and to keep an eye on their games during recess, reporting any risky condition to their teachers. We have planned it so this teamwork will not only keep the youngsters from being run over and all that, but will also be training them to take care of themselves and keep out of danger just like any Safety Scout. How does the idea strike you?"

"Fine! It's a good, practical plan! Makes me wish I were a boy again myself. Hello, here we are—out we go!"

"Why, where are we?"

"I'll soon show you." Uncle Jack led the way to the elevator and they shot up, up, clear to the roof.

"Hungry?" he asked, as a white-clad waiter showed them to a table. He enjoyed the surprise of Bob and Betty; they had never had luncheon downtown before. Mr. Dalton's hard-earned wages left no room for such celebrations as this. And a roof garden—! No wonder it seemed very strange and very grand to the Dalton twins.

They must have spent a good half-hour ordering that meal; it was fun to study the big bill of fare and pick out delicious things they "never had at home." Uncle Jack seemed to find it just as much fun as they did, and he understood pretty well how they felt as they ate and ate, while they gazed out on the roofs of the city spread out below them. It wasn't so very many years, you see, since he had been a youngster himself!

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The Cause and Prevention of Heavy Tire Expense

By WILLIAM D. MARTIN
(From Pacific Service Magazine)

After years of patient teaching on the part of tire manufacturers, to which may be added the better experience of the consumers, it is now recognized that a heavy tire bill is not a necessary evil.

Without exaggeration it may be stated that 75 per cent of repairs are made necessary by a want of a little thought, and by carelessness. Competition in the trade has been the means of making the tire manufacturers use the greatest care possible in the manufacture of the tire. Each stage of the process is carefully inspected previous to proceeding further. Providing the proper care is taken of them, the number of tires not running their mileage is very small. The most important point to be remembered is inflation. It is absolutely vital to the life of the tire to have sufficient air pressure in it to insure roundness under load. The thinnest part of the tire is at the side walls, and when not sufficiently inflated it causes violent bending at this point. Particularly is this the case when the tire comes in contact with any hard object on the road. This bending action causes a great strain on the fabric, and eventually the carcass breaks on both sides, above the bead. Too much cannot be said of the evil effects of soft riding, and not until drivers and garage superintendents absorb this fact will tire expense diminish.

No combination of rubber and fabric tire in existence will stand abuse. After the fabric is so weakened blowouts quickly occur; then follow the usual growlings and imprecations on the tire makers. It is also the chief cause of rimcutting, causing the side wall at the point where it meets the bead to come in contact with the upper part of the rim.

Naturally a perfectly inflated tire does not expose so much of its surface to the road as a soft one, and many objects that would otherwise penetrate the tread will be deflected. No one can avoid bruises and cuts altogether, but by following these instructions and using a little care they can be reduced to a minimum. A hard tire will absorb the shock of a bruise. A great many of those mysterious blowouts that occur are the outcome of a bruise, and in some future article on repair work the subject will be enlarged upon.

In Regard to Punctures

Riding on a flat tire is unpardonable, as well as being a very expensive form of locomotion. You cannot ride on a tire in that condition a hundred yards without doing great damage to the casing, to say nothing of ruining the inner tube. It might be stated here that the number of tubes turned in under that condition is excessive. One would think that they were given away by the nonchalent air in which they are returned. Most assuredly the company does not begrudge the time lost to a driver in changing a tube.

With Regard to Shoes

If it is necessary to place one in when out on the road, on arriving at the garage inform the foreman and have it attended to at once. No shoe should be allowed to remain in a casing, as when uncemented it creeps and aggravates the blowout.

Every driver should examine his tires each night and if any surface cuts that reach through to the fabric are apparent they should be repaired without delay. To allow a fire to run when the tread is cut or chipped is disastrous. Dirt works its way between the tread and fabric, and in wet

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weather moisture enters, causing the fabric of the casing to rot and disintegrate. To repair a slight cut is only a matter of a few cents and is the means of saving the tire from utter ruin. The same applies to sand blisters. They should be opened at once and vulcanized, or the tread will loosen up all round.

When the tread is seen to be wearing off flat all the way round, that is a sure indication of faulty alignment, and you had better see the garage man and have it set right at once, for it will grind off the tread in an incredibly short space of time.

The number of tires ruined by running in the car tracks is far too numerous. It is not necessary on a good road. If a driver has a very bad road to cover in his day's run and considers it more economical to save his engine by running in this manner, he should see that his tires are turned frequently and thereby get more mileage from them. Rubbing against the curbstones is unnecessary and very harmful, for it grinds off a lot of good rubber that has to be paid for.

More careful application of the brakes is needed. Quite a number of tires are ruined in this manner and only a very small percentage of the mileage has been obtained from them. This is a very bad form of abuse. Use the throttle more.

Taking corners at an acute angle and at high speed may be very spectacular and a fine exhibition of skillful driving, but it is exceedingly ruinous to the tires. So also is quick stopping and starting. If the drivers will think over the mentioned points and particularly the one about inflation, they will go a long way towards cutting down the enormous tire expense under which the company is at present burdened. Every man should carry a reliable pressure-gauge. You cannot tell the amount of air in the tire by kicking it or by the look of it.

We can now touch on a few points for the garages. Don't allow any car to rest on a flat tire, not even over night, either in the machine shop or the garage. If a car is likely to stay in for a while it is beneficial to jack up the wheels. Remember that delay in repairing a tire is fatal. When you see a tire needs attending to, have it done at once and do not leave it till another time.

Keep oil and dirt away from the tires. Many times it occurs that a machine is taken across the garage and runs through oil accidentally left on the floor. When that happens, clean the tires at once. Oil will quickly rot rubber.

Watch the tires constantly. Changing the rear to the front is sometimes beneficial. If you are replacing a front tire and have to put on a new casing and the wheels are the same size, place the new one on the rear and utilize the older for the front. Always examine a casing before applying it to see if any dirt has accumulated in it, for it will ruin the tube. Try to get a repaired casing in the front wheel, particularly a retread or a sectioned tire. Never try to put a Q. D. on a regular climber rim, you invariably break the head. Do not allow the use of a hammer in applying a casing, use a rubber mallet.

In regard to inner tubes, be sure you have the correct size. A tube too small will stretch and blow, and too large a tube will wrinkle and chafe the casing, in addition to ruining the tube itself. The combination of a good casing and a poor tube, and vice versa, is very injurious and courts disaster. Previous to putting in a repaired tube be sure that there is nothing in the shape of a piece of rock, glass or even a valvehead in it. This often occurs through carelessness of the repair man.

Keep your rims free from rust, paint them now and again on the inside where the head rests, for rust will quickly ruin a head.

If you have a large stock of new casings, put them in service at regular intervals. You will be disappointed if you expect to receive maximum mileage from a tire that has been in stock for a long time. Rubber deteriorates rapidly when not in use. Keep your repair outfit away from the machine shop. Don't have your inner tubes

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buffed on the machinist's grindstone. Rubber tubes and steel filings don't harmonize.

If you have to send the repair work outside, be sure you get a reliable concern to fix it. Inspect the place before deciding, note if everything is clean. A slovenly repair shop is not conducive to good work. Ask your repair man's advice before deciding to have a big repair done; he will tell you if it is worth it or not. The effect of a bad job is very injurious to a vulcanizing plant, therefore a good man will give you a conscientious judgment on any tire.

On no account allow the use of patent fillers for the tubes, they are all injurious to them. Tubes are constructed to contain air. Only use reliners and protectors in old casings, they will quickly ruin a new one, causing too much friction and blistering the carcase. Do not allow drivers to carry inner tubes loose in their tool bags, but provide them with linen bags. Keep the tires free from dirt by scraping and washing them, but don't use too much water. I would like to add here that drivers should steer clear of wet and muddy places in the road. Rubber is very easily cut when wet, and you never know what is concealed under these places. See that the tires are not overloaded and, also, keep your new stock in a cool place and away from the light.

I can safely say if all the above precautions are taken the tire expense will rapidly decline.

Goat Makes Better Record Than Cow for Efficiency in Milk Production

When it comes to scientific efficiency in its business, the goat has the cow beat a mile.

The industrious and intelligent goat eats only 90 per cent as much to produce a pound of milk as does the cow. Such, at least, is the proud record established for their race by three Toggenburg milk goats at the University Farm at Davis in competition, lasting a year, with five cows from the university dairy herd.

Geneva, a two-year-old pure Toggenburg goat, produced 2158 pounds of milk and 72.8 pounds of butterfat during the year. Hedda, a two-year-old Toggenburg, produced 1118 pounds of milk and 40.77 pounds of butterfat.

G. H. True, professor of animal husbandry in the University of California, found that the feed cost per pound of milk from these goats was only 90 per cent of the feed cost per pound of milk of similar average butterfat content produced by the five cows milked in this experiment.

Southern States Plant Staples

The southern states have planted this year 3,712,000 acres more of wheat and oats than in the preceding year. Cotton growers are taking advantage of the increased price for the staple to dispose of a large part of the crop to pay their debts. The demand for print cloths at Fall River is more than double what it was last year at this time, according to the data of the manufacturers.

Where Turkeys Thrive

On farms having high, dry land which has a light growth of grass, and where a breeding gobbler has lately been introduced the largest flocks and the most thrifty looking turkeys are found. Too dense a growth of underbrush, causing dampness, and inbred turkeys are prime reasons for the great mortality in the turkey-raising business.

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The Man Who Wins

The man who wins is an average man,
Not built on any particular plan,
Not blest with any peculiar luck—
Just steady and earnest and full of pluck.
When asked a question he does not "guess"—
He knows and answers "no" or "yes";
When set to a task that the rest can't do,
He buckles down 'till he's put it through.
Three things he learned: That the man who tries
Finds favor in his employer's eyes;
That it pays to know more than one thing well;
That it doesn't pay, all he knows to tell;
For the man who wins is the man who works,
Who neither labor nor trouble shirks,
Who uses his hand, his head, his eyes;
The man who wins is the man who tries.

—Exchange.

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Fresno

General Manager A. G. Wishon made trips to Los Angeles, San Francisco and the Crane Valley district during the month.

Assistant General Manager A. Emory Wishon was on the coast and in San Francisco and Los Angeles during the month.

Assistant General Manager E. B. Walthall made a business trip to San Francisco during the month.

Chief Dispatcher L. J. Moore was a visitor in the Crane Valley district during the month, in connection with work under way in that locality.

Auditor D. M. Speed spent a week in the Taft territory during the month.

Dispatcher Denney enjoyed his time off during the month on a visit to the Crane Valley district.

District Agent A. M. Frost of the Selma territory was a visitor in Fresno during the month.

Manager Hume, of the Visalia branch of the Byron Jackson Iron Works, was a visitor in Fresno during the month.

F. D. Fagan, of the Edison Lamp Works with headquarters in San Francisco, gave a very interesting lecture on the subject of efficient window lighting before the Merchants' Association of Fresno at the Commercial Club the evening of March 14th. The attendance was large and the remarks of Mr. Fagan were very well received. He showed moving pictures depicting the manufacture of Mazda lamps and also the automobile trip of Thomas A. Edison through Southern California during his recent visit to the coast. In connection with the lecture the court house was illuminated by means of flood lighting and the effect, which was very beautiful, created a great deal of comment throughout the city. Freddie Upson, of the Fresno commercial department, and L. E. Voyar, of the San Francisco office of the General Electric Company, made the installation. W. G. Gordon assisted Mr. Fagan with the moving picture machine during his lecture.

D. P. Mason, in charge of the districts of the coast counties territory, was a visitor in the Fresno office during the month and the local bunch was glad to see him. Of his new position on the coast Dave had to say: "Everything is running very nicely on the coast. We are tying in new pumping plants at Santa Maria and expect large results this season. Construction of the new steam plant at Betteravia has been started with Engineers Kalenborn and Bullard in charge. This plant alone will improve our load factor. The boys in the Santa Maria district as well as San Luis and Paso Robles, are very much alive and are looking forward to a banner year for the Midland Counties on the coast."

Raleigh Casad, district agent at Merced, was a visitor in the Fresno office during the month.

F. V. Boller, of the Coalinga district, was one of the outside agents to pay the Fresno office a visit during the month.

Paul B. Wilson, district agent at Madera, returned the early part of the Wednesday evening, March 1st, he led month from Portland, Oregon, where Miss Ida Rae Zimmerman beneath the wedding bells. The newlyweds are comfortably domiciled in a new bungalow in the northern city where they have been receiving the congratulations of their many friends in this part of the valley.

W. E. Whittington was in town from Los Banos during the month, and reports the prospects for new business very bright in his territory.

C. M. McCardle was a visitor in town from Dinuba. Things are forging to

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the front in the citrus belt and Charlie has many promising prospects in view.

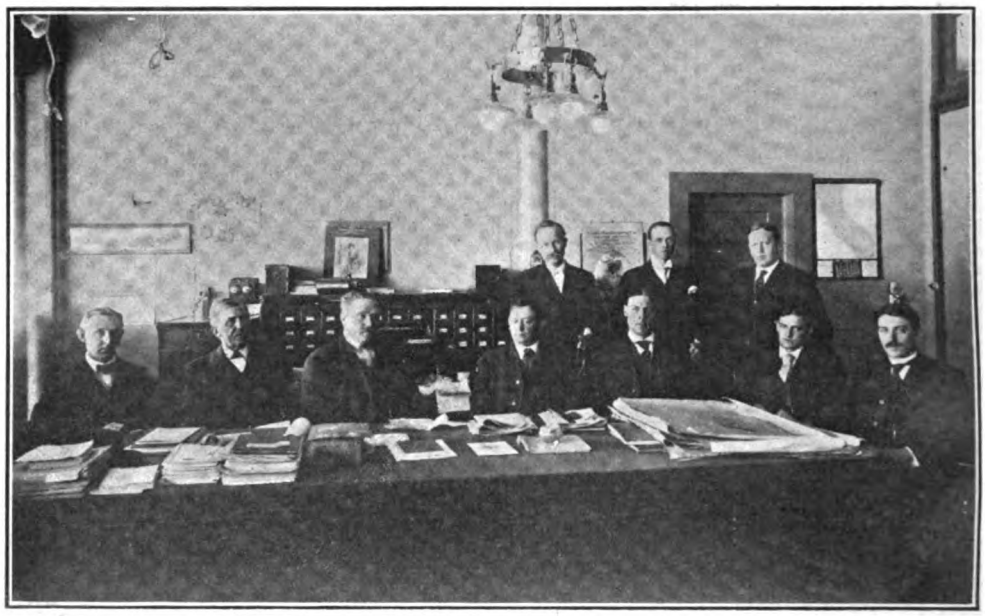
Here's a sample of the wit that floats around the stationery room: "Dear Editor: I wrote this myself. I want all the credit for it. 'She wears silk skirts so we call her Lillian because they rustle.' Good-bye, Van." We suggest a good buy would be in order after that.

William Beem was a visitor in Fresno from his Crane Valley post.

The date of the wedding has not been announced as yet but it is understood will be about the middle of April.

Miss Katherine Waterman is now doing the stenographical work in the collections department, and Miss Studer has been employed to succeed her as stenographer for Murray Bourne.

Messrs. Spalding and Shorthouse, representatives of Price, Waterhouse, who have been in the office for sev-



Eight years ago. A photograph taken in the office of General Manager A. G. Wishon at the time the corporation was known as the San Joaquin Light and Power Company and the executive staff included two popular officials who have since been called to the Great Beyond. When this photograph was taken the company controlled the Fresno Traction Company and also an interest in the Big Creek power development. Reading from left to right the officials are: Standing—J. S. Eastwood, engineer in charge of the Big Creek development; W. E. Durfey, present office assistant to the general manager and assistant secretary, at that time auditor; Louis A. Somers, traveling representative for the Westinghouse Elec. and Mfg. Company. Seated, left to right, E. B. Walthall, present assistant general manager, at that time general agent; J. H. Newlin, purchasing agent and superintendent of water works; General Manager A. G. Wishon; "Billy" Jones, former manager of the Valley Electric Company and at that time superintendent of electric wiring department; L. N. Peart, general superintendent; C. B. Jackson, superintendent of Fresno Traction Company; E. J. Crawford, assistant electrical superintendent.

Miss Nina Hickman was a sufferer from an attack of tonsilitis during the month.

C. B. Tanner, former relief operator, is now a member of the operating force of the coast counties district.

Miss Grace Sellers will leave the employ of the company April 10th, after several years of very faithful and efficient service, and shortly thereafter will be married to Mr. E. E. Bullard.

eral weeks past, completed their work here the middle of the month.

George Bauwens, who has been a member of the consumers department force for some time past, is now connected with the engineering department and is busy on the preliminary details of the new power house construction work.

H. D. Orr, operator at the Strathmore substation, and Mrs. Orr spent a

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week in Fresno during the month, while Relief Operator Downey ran things at the station. Mrs. Orr remained a few days longer than her husband so as to enjoy more of a visit with her daughter, Mrs. Renear, who is now living in Fresno.

Chet Eaton, operator at the Henrietta substation, enjoyed a week off during the month, spending the time in Visalia and Fresno. Operator Downey filled in the relief.

Del Traeger, a member of the force of the Madera district, was in Fresno during the month. Del has been putting on fat of late and looks like a heavyweight pug.

H. H. Hughes, local representative of the Westinghouse Electric and Manufacturing Company, has been joined by his family and they are comfortably domiciled in a cottage in the north end of town.

Miss Maxine Jones, of the stenographical force, was absent from her desk for some time during the month on account of illness.

Electrical Engineer A. S. Kalenborn returned from the coast counties the middle of the month for a few days work in the central office.

James Coffman, operator at the McKittrick substation, enjoyed a week's vacation the latter part of February.

C. F. Gilcrest, of the meter inspection department, made a trip through the Merced district during the month.

Mrs. J. B. Carter was a visitor from Taft the early part of the month.

Frank Klippel, of the meter department, made trips to the Clovis and Sanger sections during the month.

C. M. Blackman, district agent at Sanger, was a visitor in the Fresno office on several occasions during the month.

"Bill" Otts, the company representative at Clovis, has added an automobile agency to his many duties, and it is said that "Bill" is now using up all the gasoline he can purchase running errands for the young ladies of the town. "Bill" is the handy man of Clovis and whenever anyone wishes anything done, a phone message to "Bill" is the first resort. When a pretty young lady comes up behind you and putting her arms around your neck asks, plaintively, "Bill, won't you take me home?" what are you going to do? You surely don't blame "Bill," do you, if he has not much time for his sales prospects?

The baseball fever has again his the local office and Sunday, March 19th, two teams of the Fresno organization, one from the tower and the other from the main office, opened hostilities with a clash at Recreation Park. Eddie Hansen is the man in charge of the office team, while Jack Walsh is the "Connie Mack" of the tower club. The boys have a wealth of good material and a crack ball club can easily be developed to represent the company. Bill Leavitt was chosen to umpire the first encounter and if he performs in a satisfactory manner the boys may let him work again. The devotees of the game hope that this game is the beginning of a lively baseball season. The teams lined up as follows:

Tower	Position	Office
Stockholm	c.	Ashly
Walsh (Cap.)	1b.	Becker
Briggs	2b.	Hansen
Dodge	3b.	Bently
Summers	ss.	McMillan
Cunningham	lf.	Brown
Mulinbury	cf.	Rawlins
Crawford Shields	rf.	Simpson
Shields Crawford	p.	Van Buren
Walsh Banks Scott	subs.	Denny McCorkle

Flash:—The Tower team won, 12 to 5. Long Van pitched good ball and held the winners scoreless for several innings, but ragged support cost the lead. The Towers developed a hitting streak.

Merced

District Agent R. Casad made a couple of trips to San Francisco during the month to see Mr. J. D. McGilvary, who is figuring on installing twelve pumping plants near Livingston.

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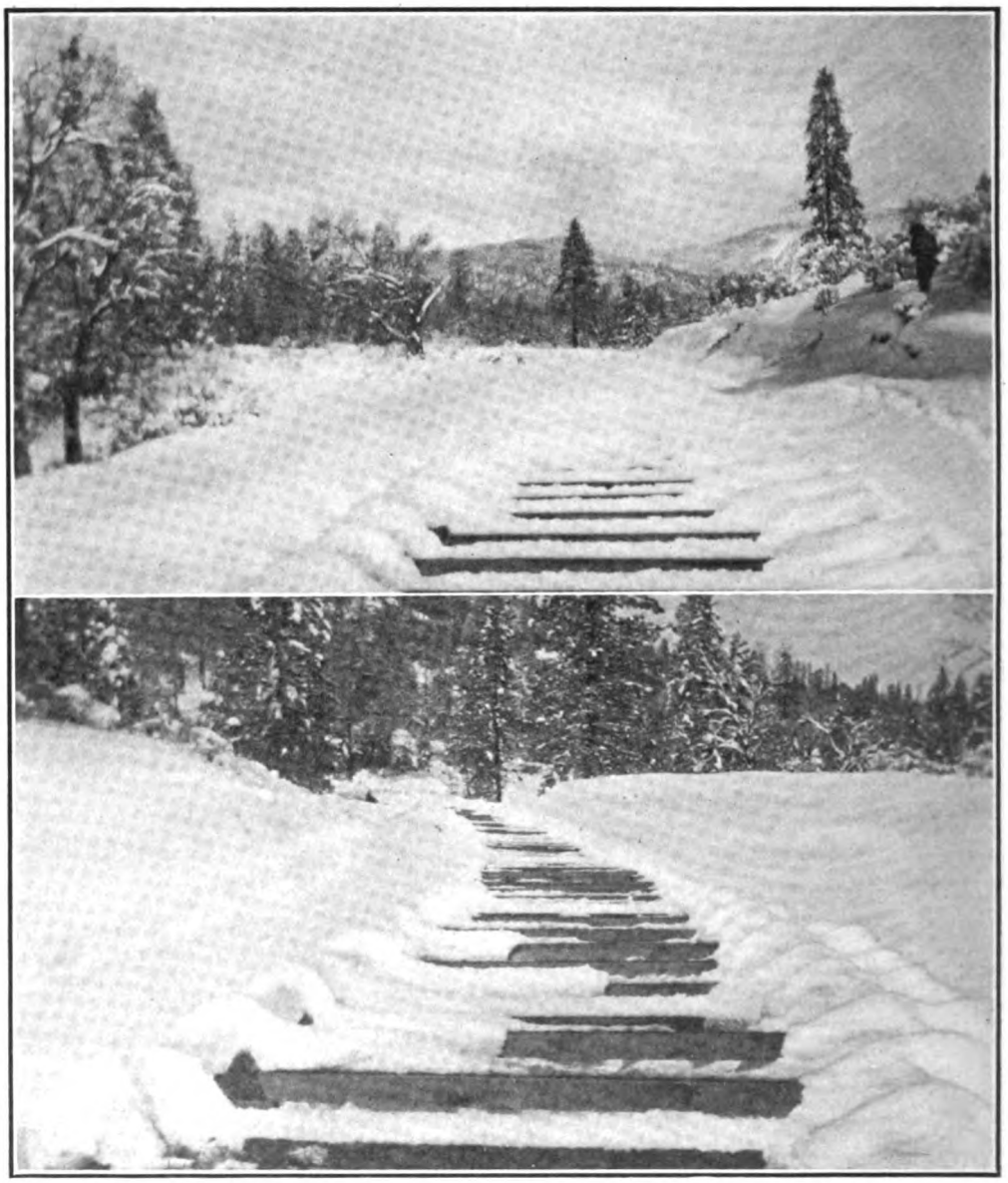

Two handsome views along No. 3 Ditch during the dead of winter. Patrolman William Beem handled the camera with particularly effective result

W. L. Blake, foreman at Merced Falls, has completed the planting of a number of fruit trees at the power house which adds considerably to the appearance of the place.

S. H. Sale, trouble man, and G. H. Graham, line foreman, are busy these days drying out motors which were flooded during the high water last month.

Mr. Casad made a trip to Fresno during the month on business.

F. Klippel, inspector in the meter department, made a trip to Merced during the month.

Mr. McKenzie, sub-station inspector, was here during the month on his regular inspection trip.

W. E. Whittington, district agent at Los Banos, went through Merced on

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his way to Fresno this month and made a short call on the Merced office.

R. Casad, district agent, made a number of trips to Merced Falls during the month in connection with the completion of the work of the power house.

Geo. Beatty, superintendent of live stock and vehicles, made a trip to Merced and while here purchased two carloads of hay.

R. Casad, with a number of the business men of Merced, attended the last day's session of the California Development Board in Fresno on March 11th.

Crane Valley

General Manager A. G. Wishon and Statistician Kinney were visitors in the district during the month, accompanying representatives of the Railroad Commission on an inspection of the properties in this territory.

Chief Dispatcher L. J. Moore was up from Fresno during the month for a short stay while making a Megger test of the apparatus in Power House No. 1.

From 6 o'clock the morning of March 14th to 5 o'clock the evening of March 16th, Power House No. 1 was shut down in order to permit the installation of the new pipe from the end of No. 1 ditch to No. 1 reservoir.

General Superintendent E. A. Quinn, Mrs. Quinn and son Ned, and Frank Ridge and Mrs. Ridge were visitors in the district during the month.

Mrs. Elmer Gates and son Charles made a visit to Fresno during the month to see the family physician.

Construction Foreman Mark Webster and Louis Quinn have been in the district for several weeks past doing inside work in the power houses, and it is expected that it will take them several weeks longer to complete the work ahead.

Zeke Johnston, foreman of the company garage in Fresno, was a visitor in the district during the month. Zeke is slowly recovering from his recent illness during which it was necessary to remove his tonsils.

Chief Inspector J. M. Buswell was in the district during the month looking after the details of his department.

Mr. and Mrs. Hugh Carling, the latter a sister of "Mother" Gates, were in the district during the month on a very pleasant visit.

Corcoran

District Agent O. A. Kommers has been putting his time in to good advantage since his arrival from Paso Robles, having signed up considerable new business in this territory the past month and the outlook for more in the near future is very promising.

Collector L. C. Deck has severed his connections with the company and returned to his home in Durant, Oklahoma.

The jovial faces and welcome smiles of Mark Webster, Bill McKenzie and their respective helpers have graced this office several times in the last few months: Come again.

Judge Murray Bourne was a visitor to this office during the past week on legal business, journeying on to Bakersfield.

Chief Clerk Bero and his family have returned from an extended trip to Los Angeles, Salt Lake City and San Francisco, and are now keeping house once again, much to the delight of the "boss."

Foreman Vance Smith and crew have recently completed several new extensions in the city and are about to commence construction of additional ones in the outside districts.

G. S. Warren has taken the position of collector and stores department clerk to fill the vacancy made by the resignation of Mr. Deck.

Troubleman Dodson has had his hands full the past few weeks looking after the interests of consumers owing to the severe windstorms this section has experienced the past month.

District Agent Kommers has made several flying trips to Fresno relative to new business in this district.

The "Cream City Band," a local organization, gave its first open air concert on the evening of March second, and was received with great appreciation. Although they have been organized but a few short months their

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selections were well rendered and it bids fair to become a credit to our city.

Renewed interest in the growing of rice in this district is manifested by the increased activity shown by growers and also by the numerous inquiries made at the company's office by outside parties who are looking into the adaptability of this soil for the successful growing and culture of the grain.

Among the new business already signed by District Agent Kommers are four 15 horsepower plants for the Guaranty Land and Investment Company for the development of four wells the company is sinking on the south half of section 35, 20-22 to supply the water for a planting of 400 acres of rice this season.

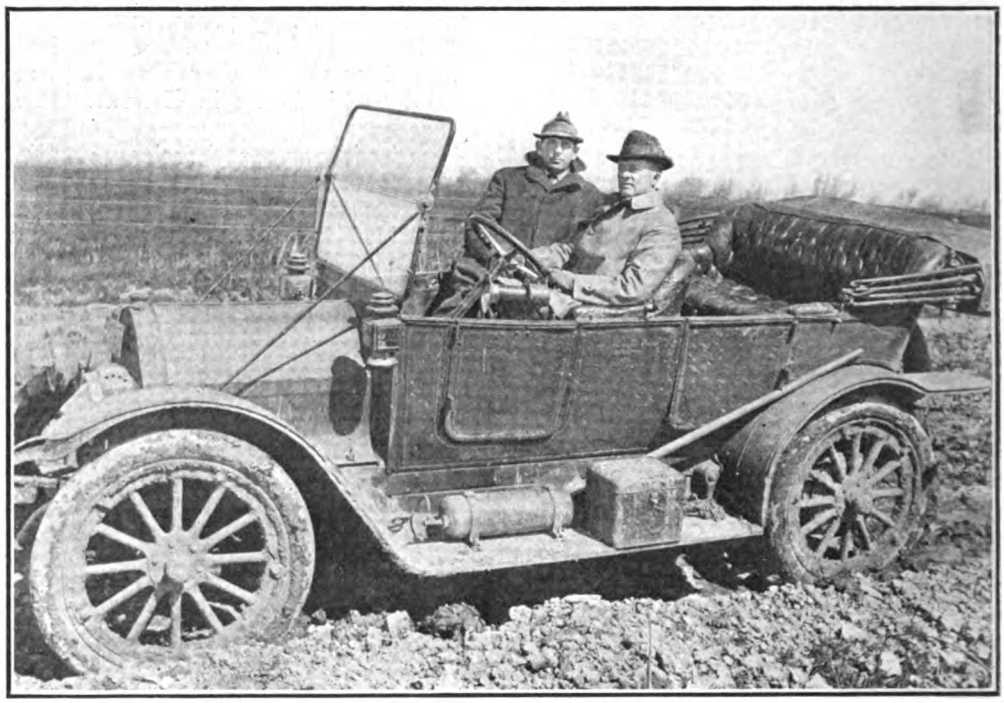
Mr. Kommers has also secured the signature of George Hanna, one of the best known land owners in the Corcoran district, to a contract for a 10 horsepower plant to irrigate eighty acres of alfalfa being put in by Mr. Hanna this season.

Taft

A. G. Carpenter, operator at the Midway substation, with Mrs. Carpenter and son, spent their vacation during the month on a visit to Bakersfield.

District Agent Jack Carter has offered a reward in order to discover the identity of the blonde chicken who made the trip from Taft to Bakersfield with Electrical Superintendent Easton recently.

During one of the recent heavy rainstorms that visited this section District Agent and Mrs. Carter were on their way to Bakersfield and met with an experience that might have been disastrous for a well known west side man and his wife, had not the power company man happened along just about at the right time. After crossing the Cole's levee, Carter noticed a Ford turned over along the roadside.



O. A. Kommers, district agent at Corcoran, and Roger M. Roberts, Agricultural Demonstrator of the Santa Fe System, traveling some of the Tulare Lake bottom roads after a rainstorm. The roads in this territory offer many problems to the motorists, but thanks to his powerful car, Mr. Kommers gets by pretty well. Only once in a while is he forced to walk to a farm house to seek assistance in the form of mule power.

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Coming closer he could discern the bodies of a man and woman lying under it, and speeding up so as to render aid as soon as possible, he succeeded in assisting A. M. Keene, editor of a string of west side newspapers, and Mrs. Keene to their feet. The overturned car was righted and Keene continued on his way to Taft. As Keene prides himself on printing all the news of the west side all the time, Jack deservedly expected to read an account of his heroic rescue in the evening's paper, but you may imagine his chagrin when not a word was to be seen in the lively columns of the Keene paper that evening. Jack certainly thought the story would appear the next night then, and he again looked, but again without success. The story has never appeared, so Jack declares that his confidence in Keene's newspaper policy is beginning to waver.

Weaver Pittman, who was severely injured during the recent storms, has fully recovered and is again back on the job.

Bert Call, who has resigned after many years of faithful service

Coast Counties

Bert Call, who has been in charge of the San Luis Obispo plant for many years, has resigned. He is the oldest and best known employe on the coast and expressions of regret from all sides have been received in this office from employees of the company and others. It is unnecessary for your correspondent to comment upon the ability of Mr. Call or of his integrity and loyalty to the interests of the company during the long period of his employment. This is too well known and we, in San Luis Obispo, more than the others realize the loss to us and the loss to the company.

Mr. Call entered the employ of what was then the Thompson Hughston Electric Company in 1893 and has remained with the plant continuously since that time throughout the many changes of ownership. Mr. Call states that the first electric installation of any kind in San Luis Obispo was a forty-five light series arc machine which was installed about 1887 and used up until 1891 for street and commercial lighting. About 1891 the Thompson Hughston Company installed a 35 K. W. generator which gave the first lights to the residential section and also supplied the commercial lights. The forty-five light series arc machine was then diverted to street lights exclusively. The gas company at that time was owned by Mr. E. S. Hoyt, uncle of two of our present employees, Ed. Hoyt and Miss E. B. Hoyt. About the year 1903 Mr. Hoyt interested the Boardman Fricke and Ghrisel interests, and absorbing the interest of the Thompson Hughston Electric Company, consolidated under the name of San Luis Gas and Electric Company. The old gas plant was constructed about 1904 and has been operating ever since as an oil gas plant. About 1908 the Boardman interests, together with the interests represented by B. F. Pearson and J. M. Berkley, purchased the interests of Mr. Hoyt. Mr. Call was made manager at that time. In 1904 the San

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Locating water before selecting spot for the sinking of a new well for the water works at Arroyo Grande. The ability of persons to determine the presence of subterranean bodies of water by means of a crotched stick is a well known fact, and Mr. Seeley, the well driller who put down the hole for the company, prides himself on this accomplishment. Mrs. Reilly, another well known resident of Arroyo Grande, also possesses this power of witchery and when Manager D. P. Mason, of the coast counties district, was ready to proceed with the location of the new well, he thought it advisable to obtain the opinions of the two "wizards" before determining the exact site of the hole. The photograph shows the stick in the hands of Mr. Seeley already pointed downward, while that of Mrs. Reilly's is just going down. Their locations were less than six inches apart, and a good well resulted. N. N. Short, Mrs. Reilly's father, is seen in the background interestingly watching the stick in his daughter's hand.

Luis Gas and Electric Company had the C. C. Moore Company install a 250 K. W. generator and the same was operated single phase until 1908, when the company started the distribution of power, and the machine was changed to three phase. The present 100 K. W. Bullock generator was changed to three phase at that time also. Mr. Call states that when this latter named machine was purchased about 1897 it was 75 K. W. 115 volts, 150 amp. with a D. C. exciter operating single phase slotted for three phase, but that in 1908, when the company took on a day load, the armature windings were changed and it was operated as a three phase 100 K. W. generator. Mr. Call states that this was the first revolving field generator ever brought to the coast and was on exhibition in San Francisco before it was brought to San Luis Obispo.

Mr. Call has not completed any plans for the future but he has several propositions to consider, and there is one of two that your correspondent feels confident Mr. Call will take. This is an extended hunting and fishing trip and traveling, to occupy about one year. The other is to go extensively into the ranching business. If he chooses the latter it will be at the urgent solicitation of the younger members of the Call family who, we are informed, will request their father to make the first expenditure in some nice little ponies for their own personal use. All employees of the company extend to Mr. Call their best wishes. His genial and good-natured disposition will carry him through very easily. We realize that we are losing not only an able adviser, but a friend. Mr. Call, however, will always keep San Luis Obispo as his home and this is the only consolation we have in his dis-associating himself with the Midland Counties.

Assistant General Manager A. Emory Wishon paid the coast counties districts a visit during the month.

General Superintendent E. A. Quinn was in the territory from Fresno during the month looking after the commencing of operations at the Betteravia steam plant.

Electrical Engineer Kalenborn, who is in charge of the construction of the new steam plant, has arrived from Fresno and has established his headquarters with operations well under way.

Warren Ten Eyck has recovered from his recent illness and following his return from Fresno went to Santa Maria in the interests of new business.

G. H. Stevenson, formerly chief clerk of the Santa Maria office, who resigned some time ago to pursue the ranching game, apparently has had enough of this sport in a foreign country and is heading back to Santa Maria, according to advices received by friends here.

D. P. Mason, in charge of the coast

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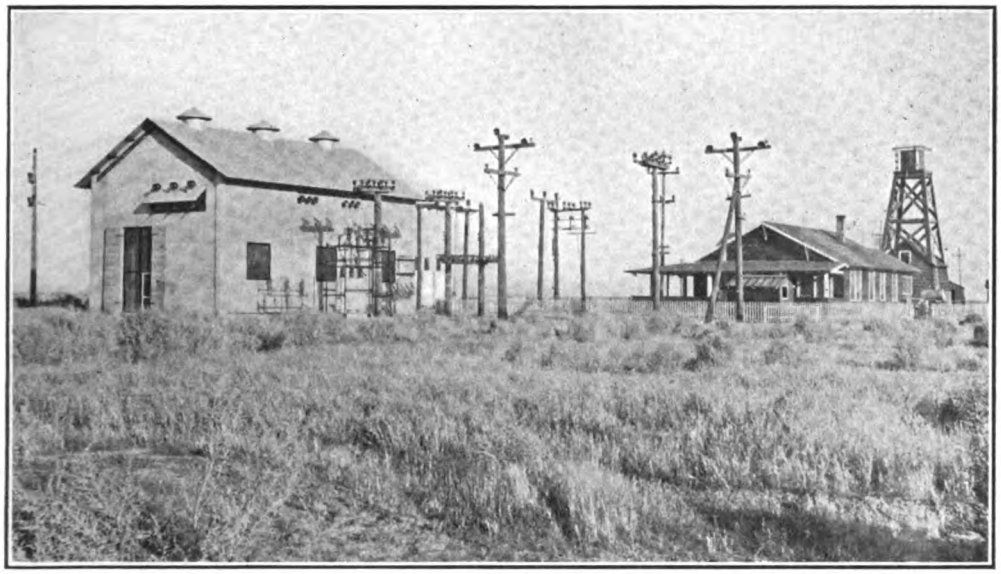
counties properties, went to Fresno during the month on business matters concerning this territory.

R. A. Shelbourne, for four years past a member of the office force of the Santa Maria district, has tendered his resignation and will leave in a short time for Oklahoma City where he will enter business for himself. All of Shel's many friends in this territory wish him the best of luck in his new undertaking.

M. Leisy has been employed to take over the operation of the steam plant at Santa Maria, following the resignation of Bert Call.



Henrietta substation, on the plains of the West Side

Work has been begun on the new 2500 K. W. steam plant being erected at Betteravia adjacent to the factory of the Union Beet Sugar Company. This location was chosen for the reason that ceeling water for condensing purposes is more accessible here on account of the nearness to the lake, and secondly, because a contract just entered into with the sugar company to supply their factory and water pumps with electricity for operating purposes. This contract is the most important that has yet been made by the Midland Counties Public Service Corporation. It includes the factory power for this year, and also the Harris and Betteravia irrigation plants. Approximately 400 horsepower will be required at the present time, but the prospects are that within a few years the installation will include the entire irrigation facilities of the Union Beet Sugar Company, which will require the addition of an equally large if not larger horsepower. The plant is in proximity of the Santa Maria oilfields, which will make it possible to use natural gas under the boilers. The plant is sufficient to supply the needs of the entire coast counties territory at present and to also furnish power for the valley districts. The construction has been so designed as to permit of additions whenever the requirements demand.

Bakersfield

Gas Superintendent A. Y. Meudell made a trip to Selma during the month to investigate conditions at the plant in that city. Accompanied by District Agent Jack Frost, he journeyed on to Fresno later in the day.

Auditor D. M. Speed stopped over in Bakersfield during the month while on his way to Taft.

The stork had a busy time of it during the month of February, visiting

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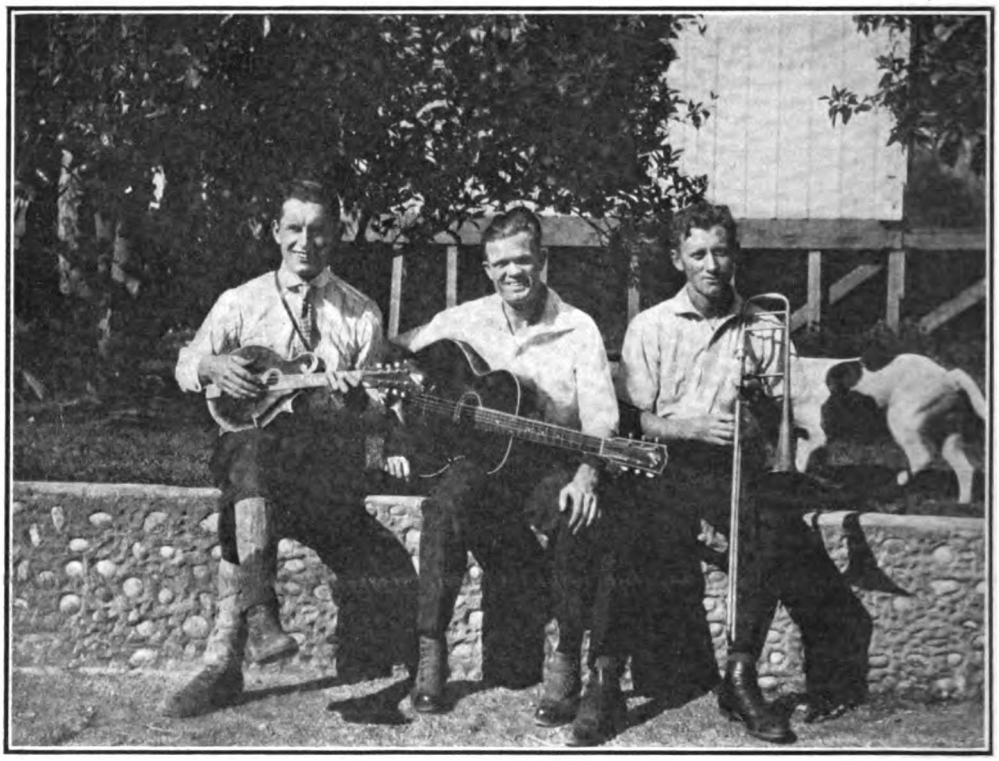
the homes of two of the members of the local force, and the visitations were made on the same day, February 19th. In each instance the great bird left little girls. The homes which have thus been gladdened are those of Oscar Beck, of the consumers department, and Glenn E. Giger, of the electrical department. Everything is progressing as smoothly as can be desired and

signed some large business for the coast counties district.

S. G. Gassaway, of the General Electric Company, made the Bakersfield office a business call during the month.

Superintendent J. K. Schultz of the Canyon plant was in Bakersfield during the month.

George Beatty, in charge of the live stock and vehicle department, was



The "Minstrel Band" at the Kern River Canyon power plant, showing that life in the hills has a variety of attractions. From left to right the musicians are John Astor, "Doc" Radford and Van Meter, and from all accounts they churn a high-class article of ragtime.

the fathers are more proud than the proverbial peacock.

A. Y. Meudell, superintendent of the gas works, has returned from the coast where he has been on company business for the past few weeks.

Electrical Superintendent C. L. Easton made a trip to Tule River during the month on company business.

E. D. Farrow, Jr., was called to San Francisco on company business and stopped off at Fresno on his return trip. While in the bay city Mr. Farrow down from Fresno during the month.

Frank Klippel, of the Fresno office, was in Bakersfield for a few days and was a welcome visitor at the office.

Neil Jacobs and Guy Dumble were initiated into the D. O. K. K. Lodge Monday night, February 21st, and it was some time from all reports. Monday afternoon Guy was paraded up and down the principal streets dressed in stripes and dragged a ball and chain attached to his leg. Lou Johnston was the judge and showed no mercy to

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anyone, not even his fellow employees. Tuesday, February 22nd, being a holiday, it gave the boys a chance to rest up and they were able to be at their desk Wednesday morning. Not many traces of their long trip across the hot sands were left.

Murray Bourne made the Bakersfield office a business call during the month.

Mr. Gavins has taken the position with the stores department vacated by C. E. PePue, the latter leaving to take a position with the Pacific Light and Power Corporation in Los Angeles.

Garfield Gregg was absent from the office several days due to illness.

Electrical Superintendent C. L. Easton made a business trip to Taft and the west side fields during the month.

C. E. Gilcrest, of the meter department, was in Bakersfield on business during the month.

Auditor D. M. Speed made the Bakersfield office a call during the month.

Due to the amount of work in the consumers department, Mr. Powers, collector, is assisting, giving one-half his time to the collection work and the balance in the office.

Clarence Hughett, formerly employed in the Bakersfield office, called during the month and it seemed good to see his smiling face again.

During Mr. Gregg's illness, John King, meter reader, assisted in the consumers department.

Arthur Church was in Los Angeles during the month for a few days visit.

Otis Burdick, assisted by Toby Hoenshell, has been making a test of the power meters. They finished the Bakersfield and west side districts and are now in the Wasco and McFarland districts.

A. Y. Meudell received a newsy letter from Mr. Brisbane, who is now with the J. G. White Company at Binghampton, New York, installing a power plant. He met Mr. Dougherty and Mr. Barnard. They all wish to be remembered to the S. J. L. & P. Co. boys.

The report has reached Fresno that Miss Martha Graham, the obliging guardian of the local telephone switchboard, is wearing a sparkler on a telltale finger and there seems to be much concern among certain parties in the northern office. Miss Graham is maintaining a strict censorship and according to latest report the curiosity of these members of the Fresno office is still going unsatisfied.

During the past few weeks the delightful spring weather has ushered in the poppy and wildflower season, and auto parties and picnics to these beautiful fields in the Weed Patch and the plains are much in order. This brings to mind the annual picnic of the Bakersfield office force, and while the K. V. A.'s have been inactive for some time past, it is not likely that the annual plunge and picnic at Weit's Resort at Wasco will be allowed to pass by the boards this year. Mrs. Weit and Eddie have made a number of very attractive improvements in their inviting place during the winter months and will be prepared this time to take better care than ever of the crowd—and this is saying a whole lot, for the picnics in the past could hardly have been improved upon. It is hoped that

Frank McGeorge in the snow at Tule River headquarters, giving an idea of the severe storms that visited that section of the system during the past winter.

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a larger representation will be present from Fresno this time.

The following rays of wisdom have filtered into the office. They were submitted to the "Live Wire" for approval but the guardians of the destiny of that department refused to assume the responsibility of their publication so it has fallen upon this section to give them a hearing. So here goes:

H—"Caliente is certainly a hot town."

B—"Why?"

H—"Arthur says so."

B—"Arthur who?"

H—"Our thermometer. Har! Har!"

District Agent O. A. Walthall, of McFarland, is happy again for he has another faithful canine companion. The little bow wow is a fox terrier, of the same family as the late lamented Jim, and in appearance a pocket edition of the former pet. In actions and accomplishments the latest Jim is proving to be the equal of his predecessor, and there is not a dog in the entire country that his master visits that he is afraid to stand up and measure wits with. The latest acquisition has been named Jim II and his master has very proudly decorated him with a handsomely lettered brass plated collar. Jim II is every bit as faithful as his departed namesake, and now that he is filling the place long vacant in the district agent's car, the vehicle again bears its old-time familiarity to Walthall's many patrons. "Jum" owes possession of the new dog to Mr. and Mrs. Eddie Weit, of Wasco, who smoothed the way for the presentation.

With the Street Car Boys

Motorman Crandall was compelled to remain off duty for several days during the month on account of the very serious illness of his wife. Mrs. Crandall is now in a greatly improved condition.

Motorman Weighan changed runs with Conductor Spear for the month on account of the injured foot of Conductor Spear. Weighan is able to perform duty on either end of the car.

Conductor C. Cummings is domiciled in his new home on south K Street. Clyde says there is nothing like having a home of your own, and he advises all of the single boys to tie up and break away from the lunch counter boarding plan.

Motorman J. Moore, who was among the unfortunates flooded out in the Arp tract during the recent overflow of the Kern River, has leased a small farm on south A Street and is again putting in all of his spare time working about the place.

Motorman Sanford was confined to his home for several days during the month on account of illness.

Motorman George Young, another of the back to the soil boys among the local car force, has moved to a place on south Union Avenue, which he is making work for him while he is busy running cars.

Conductor Crossno has received word of the sad death of Mrs. Grossno's mother in her eastern home. The ending came very suddenly.

Conductor Shaffer has sold his home on Kentucky Street and has moved into new quarters on north Baker Street.

Conductor W. Hilton has returned from a month's trip to Danville, Ill., where he was called on account of the death of his mother.

Conductor Earl Warren did the batching act for a while during the month while his mother was on a visit to her son, Clyde, who is the foreman of one of the Land Company ranches near Wasco.

Motormen E. Turner and C. Cummings have taken motor bus runs on the Nile Street route, drivers Cook and Farris returning to the car lines.

Safety First!

Farmer: "When's the next train north?"

Station Agent: "In an hour."

Farmer: "When is the next train going south?"

Station Agent: "Fifty minutes."

Farmer: "All right, Mirandy, we can get across the tracks."

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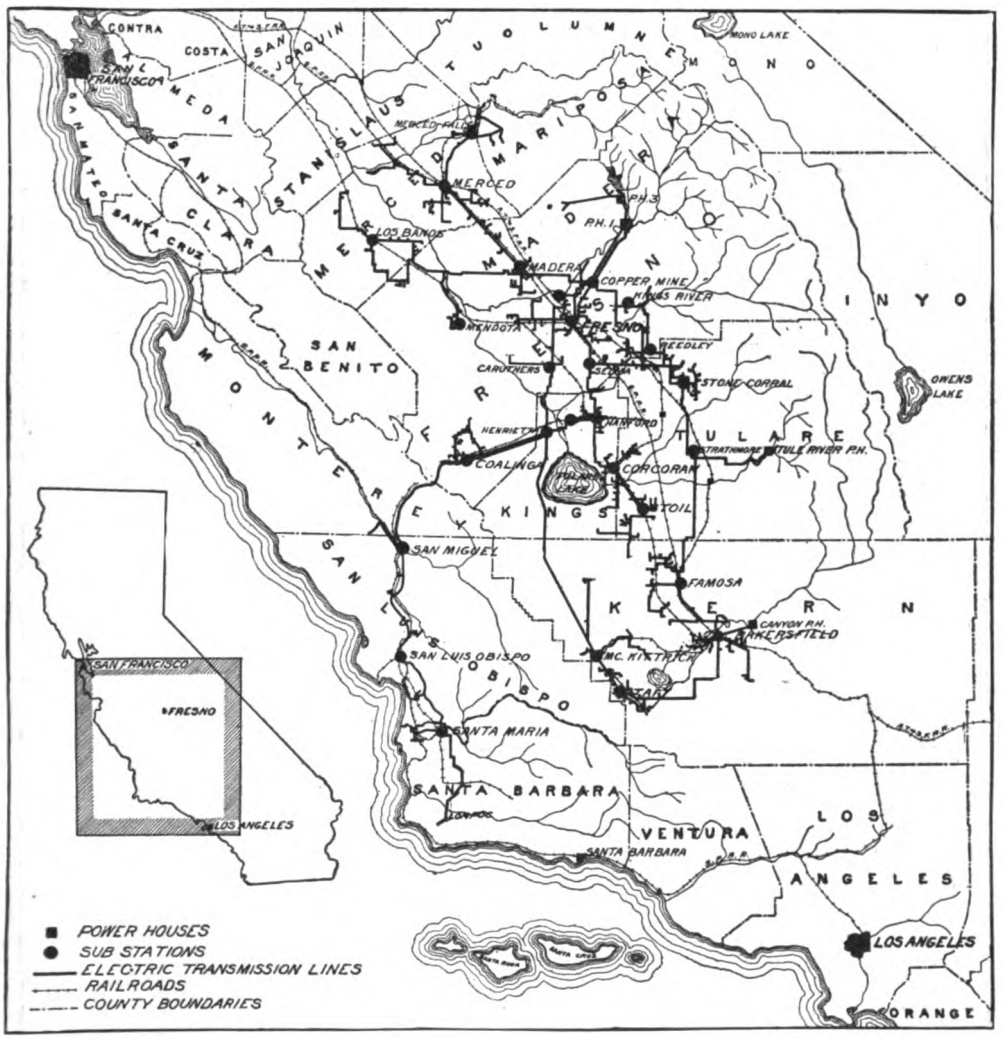
TERRITORY OF THE

San Joaquin Light & Power Corporation

Map Showing the Ten Counties Served and Extent of Territory as Compared to the Total Area of California



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San Joaquin Light & Power Corporation

AND

Midland Counties Public Service Corporation

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A. C. BALCH, Vice-President	Los Angeles
A. G. WISHON, General Manager	Fresno
A. EMORY WISHON, Assistant General Manager	Fresno
E. B. WALTHALL, Assistant General Manager	Fresno
A. E. PEAT, Treasurer and Comptroller	Los Angeles
L. M. FARNHAM, Secretary	Los Angeles
W. E. DURFEY, Assistant Secretary	Fresno

COMMERCIAL DEPARTMENT

J. H. NEWLIN, Purchasing Agent	Fresno
D. M. SPEED, Auditor	Fresno
S. B. PATTERSON, Stores Department	Fresno
E. D. FARROW, JR., General Agent	Fresno
R. CASAD, District Agent	Merced
W. E. WHITTINGTON, District Agent	Los Banos
PAUL B. WILSON, District Agent	Madera
M. E. NEWLIN, District Agent	Fresno
C. M. McCARDLE, District Agent	Dinuba
A. M. FROST, District Agent	Selma
C. M. BLACKMAN, District Agent	Sanger
FRED MUSTON, District Agent	Lemoore
O. A. KOMMERS, District Agent	Corcoran
O. A. WALTHALL, District Agent	McFarland
H. M. CRAWFORD, District Agent	Bakersfield
J. B. CARTER, District Agent	Taft
F. V. BOLLER, District Agent	Coalinga
D. P. MASON, District Agent	San Luis Obispo

OPERATION AND CONSTRUCTION DEPARTMENT

EDWARD A. QUINN, General Superintendent	Fresno
A. S. KALENBORN, Electrical Engineer	Fresno
E. J. CRAWFORD, Superintendent of Operation	Fresno
C. L. EASTON, Electrical Superintendent, Southern Division	Bakersfield
HARVEY SHIELDS, Electrical Superintendent, Northern Div	Fresno
ELMER GATES, Power House Superintendent	North Fork
J. K. SCHULTZ, Power House Superintendent, Kern Canyon	Bakersfield
JACK NELSON, Power House Superintendent, Tule River	Springville
A. Y. MEUDELL, Superintendent Steam Plant	Bakersfield
J. M. BUSWELL, Chief Inspector	Fresno
C. F. GILCREST, Chief Meter Department	Fresno
G. O. NEWMAN, Chief Engineer	Los Angeles
D. L. WISHON, Civil Engineer Construction and Maintenance	Fresno
WM. STRANAHAN, Civil Engineer Operation	Fresno

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